ARIZONA

HEALTH STATUS AND VITAL STATISTICS

1987

SPECIAL SECTION: Causes Of Infant Death By Region, 1973-1987

ARIZONA DEPARTMENT OF HEALTH SERVICES
Office of Planning and Health Status Monitoring

Rose Mofford, *Governor*
State of Arizona

Ted Williams, *Director*
Arizona Department of Health Services

ARIZONA DEPARTMENT OF HEALTH SERVICES
OFFICE OF PLANNING AND HEALTH STATUS MONITORING
1740 West Adams Street
Phoenix, Arizona 85007

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ARIZONA HEALTH STATUS
AND VITAL STATISTICS
1987

BY

JOANNE C. GERSTEN, Ph.D.
CHRISTOPHER K. MRELA, Ph.D.

ARIZONA DEPARTMENT OF HEALTH SERVICES
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INTRODUCTION

This publication by the Arizona Department of Health Services is the 1987 update of information on the health status of Arizona residents and vital statistics. Arizona Health Status and Vital Statistics 1987 provides readers with population-level data on trends in the health of Arizona residents. It is organized into two major parts with several sections.

The first part is concerned with health status and the second is devoted to vital statistics. The series of tables presenting the data in each part are given in a listing before the health status portion of the report begins. This listing should aid readers who need specific data for planning and other purposes.

The health status portion of the report has six sections that describe and summarize health trends from at least 1982 to 1987. The first section deals with natality, i.e. fertility and birth rates, the general health of newborns indexed by birthweight, and some demographic and prenatal care characteristics of the women giving birth.

The second or total mortality section compares the age-adjusted profile of leading causes of death for Arizona residents with the profile for residents of the United States. In addition, gender and county differences in total and cause-specific age-adjusted mortality rates are examined for Arizona. The third section addresses age-specific mortality. The five leading causes of death are discussed for infants, children (1 to 14 years), adolescents (15 to 19 years), young adults (20 to 44 years), middle-aged adults (45 to 64 years) and the elderly (65 or more years). Within each age group, comparisons in cause-specific mortality are made between genders and between urban (i.e. Maricopa and Pima counties) and rural (i.e. all other counties) regions of the state. Gender-specific total mortality also is compared for urban and rural areas.

The fourth or special section is devoted as its name implies to a mortality issue of special concern. Two facts primarily inspired this year's special section on infant death. First, Arizona's infant mortality rate has not improved since 1982. Secondly, the 1988 report by the National Commission to Prevent Infant Mortality spotlighted the poorer chances babies born in the United States have to reach their first birthday compared to infants born in other developed countries. Temporal patterns from 1973 to 1987 in infant mortality were examined by region of the state, period in infancy when the death occurred and cause of death in order to improve our understanding and to uncover possible factors which could reduce the incidence of infant death in the future.

Morbidity, levels of disease and disability in the population, is the topic of the fifth section. The discussion is limited to data on diseases and/or disabilities reported for the entire population of the state in 1987 because of legal reporting requirements. Health status concludes with the sixth section that summarizes trends which represent either improvements or deteriorations in health status. A trend had to be of several years' duration to qualify as an indicator of either progress or a problem in health status. Trends are particulary important if they are indicative of an increasing risk of premature death or disability.

The second part of the report contains vital statistics information with no accompanying narrative. Tables in six sections give data on 1) population composition; 2) births; 3) maternal, perinatal and infant mortality; 4) deaths; 5) marriages and divorces; and 6) pregnancies and abortions. Vital statistics used for health status are found in part one.

DATA SOURCES, LIMITATIONS AND DEFINITIONS

SOURCES OF DATA

Information on births, deaths and fetal deaths was compiled from the original documents filed in the Arizona Department of Health Services, Office of Vital Records, and from transcripts of original certificates filed in other states but affecting Arizona residents. (Copies of certificates for births, deaths and fetal deaths occurring to Arizona residents outside the United States are not sent to Arizona). Information on abortions performed on Arizona women was compiled from reports sent to the Arizona Department of Health Services by facilities within but not outside the state. Pregnancies are the sum of live births, spontaneous terminations of pregnancy (fetal deaths or stillbirths) and induced terminations of pregnancy (abortions). Arizona has no central registry for marriage or divorce records. Statistics were limited to counts of marriages and divorces reported monthly by the Clerk of the Superior Court of each county in which the marriage or divorce occurred. These reports contain no personal or demographic data on the people marrying or divorcing.

POPULATION

Population estimates, used to calculate rates, are from the Population Statistics Unit in the Arizona Department of Economic Security and the U.S. Census Bureau.

RELIABILITY OF RATES

Many rates shown in this report are based on a small population, a small number of events, or both. Rates based on small numbers are unreliable and thus should be used with caution. Rates for many counties also vary considerably from year to year due to small populations and few events. In addition, no adjustments for differences in the distribution of age or other demographic variables have been made to the rates given in the Vital Statistics portion of this report. Therefore, caution must be exercised when forming conclusions on the basis of these crude or non-adjusted rates.

DEFINITIONS

Occurrence data - data compiled by the place where the event occurred, regardless of the person's place of residence.

Residence data - data compiled by the person's usual place of residence without regard to the geographical place where the event occurred.

Terms related to natality

Total Births - Sum of all live births.

Live Birth - The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy which, after such expulsion of extraction, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Birth Weight - Weight of fetus or infant at time of delivery.

Low-Weight Birth - Live births who weigh 2,500 grams or less (approximately 5 lbs., 8 ozs.) at delivery.

Birth Rate - Number of live births per 1,000 population.

Age-Specific Birth Rate - Number of live births to women in specific age group per 1,000 estimated female population in that age group.

Low-Weight Birth Rate - Number of live births weighing 2,500 or less grams (5 lbs., 8 ozs.) per 1,000 births.

General Fertility Rate - Total number of live births per 1,000 women of childbearing age (15-44 years).

Total Fertility Rate - The sum of each age-specific live birth rate multiplied by the number of years in the age group.

Pregnancies - The sum of live births, fetal deaths and abortions.

Pregnancy Rate - Number of pregnancies per 1,000 females of childbearing age.

Age-Specific Pregnancy Rate - Number of pregnancies to women in specific age group per 1,000 estimated female population in that age group.

Natural Increase - The excess of births over deaths.

Natural Increase Rate - The excess of births over deaths per 1,000 population.

Abortion - An induced termination of pregnancy with an intention other than to save a live fetus is the only abortion event reported to the Arizona Department of Health Services. Spontaneous abortions or expulsions of a nonviable fetus of less than 20 weeks gestation are not reported.

Abortion Rate - Number of reported abortions per 1,000 females of childbearing age.

Age-Specific Abortion Rate - Number of reported abortions to females in a specific age group per 1,000 female population in that age group.

Terms related to mortality

Underlying Cause of Death - That condition giving rise to the chain of events leading to death. All causes of death are coded in accordance with the International Classification of Diseases, ninth Revision adapted for the use in the United States (ICD).

Fetal Death - Death prior to the complete expulsion or extraction from its mother of a product of conception that has reached at least 20 weeks of gestation. The death is indicated by the fact that after such expulsion or extraction the fetus does not breathe or show any evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Neonatal Death - Deaths occurring to infants less than 28 days of age.

Postneonatal Death - Deaths occurring to infants at least 28 days of age but under one year of age.

Infant Death - Deaths occurring to infants less than one year of age or the sum of neonatal deaths and postneonatal deaths.

Crude Death Rate - Number of deaths per 100,000 population.

Cause-Specific Death Rate - Number of deaths from a specific cause per 100,000 population.

Age-Specific Death Rate - Number of deaths in a specific age group per 100,000 population in that age group.

Age-Adjusted Death Rate - Total mortality and cause-specific death rates are age-adjusted using the direct method by multiplying the mortality rate for each age group within a population grouping by the population of that age group within a standard population. The standard population used was the population of the United States in 1940, the same standard population used by the National Center of Health Statistics. The sum of these results for each of these age groups for a given population is the age-adjusted rate. The age-adjusted rate is expressed as a rate per 100,000 population.

Fetal Death Rate - Number of reported fetal deaths per 1,000 live births.

Infant Death Rate - Number of deaths under one year of age per 1,000 live births.

Neonatal Death Rate - Number of deaths under 28 days of age per 1,000 live births.

Postneonatal Death Rate - Number of deaths between 28 days of age and one year of age per 1,000 births.

Maternal Death Rate - Number of deaths due to complications of pregnancy, childbirth or the puerperium (ICD 630-676) per 100,000 live births.

Ethnicity - In previous years, persons of Spanish/Hispanic origin were classified as "White." However, the Arizona birth and death certificates record Hispanic origin for all races which permits differentiation of persons classified as "White," "Black," "Native American" or "Asian" into those who simultaneously are or are not of Hispanic origin.

Starting in 1978, Yaqui Indians were no longer classified as White but Native American. The Native American figures include those living both on and off the reservation.

Entries of "unknown" and "not specified" race/ethnicity on birth or death certificates occur rarely, i.e. less than 0.1 percent. For this reason, they are included in the natality or mortality data with the modal category of "White" unless stated otherwise. Ethnicity of mother, father or descendant is as stated on certificate. Ethnicity of infant is determined from ethnicity of the parent(s) using classification procedures established by the National Center for Health Statistics.

CLASSIFICATION OF CAUSE OF DEATH

The cause of death used in this report is the underlying cause classified according to the rules given by International Statistical Classification of Diseases, Injuries, and Causes of Death. Listed below are categories, International Classification of Disease (ICD) codes, and examples of specific diseases for selected causes of mortality discussed in this report. The numbers are the codes from the ICD classification (Ninth Revision, 1975) which cover that cause of death.

Cause of Death Category	ICD Code(s)	Examples
Infectious and parasitic diseases	001-041, 045-139 *042-*044	Tuberculosis, septicemia, viral hepatitis, coccidioidomycosis, human immunodeficiency virus (HIV) infection
Malignant neoplasms	140-208	Lung cancer, leukemia, breast cancer, colon cancer
Diabetes mellitus	250	Diabetes with coma, diabetes with ophthalmic manifestations, diabetes with renal manifestation
Alcoholism	291, 303 571.0-571.3	Alcoholic psychoses, alcohol dependence syndrome, cirrhosis of liver
Diseases of heart	390-398, 402 404-429	Myocardial infarction, hypertensive heart disease, cardiomyopathy, cardiac dysrhythmias
Cerebrovascular diseases (stroke)	430-438	Intracerebral hemorrhage, occlusion of cerebral arteries
Atherosclerosis	440	Atherosclerosis of aorta, atherosclerosis of renal artery
Other diseases of the arteries	441-448	Aortic aneurysm, arterial embolism and thrombosis, polyarteritis nodosa, diseases of capillaries
Pneumonia and influenza	480-487	Viral pneumonia, bronchopneumonia pneumococcal pneumonia, influenza
Chronic obstructive pulmonary disease (COPD)	490-496	Bronchitis, emphysema, asthma, bronchiectasis, allergic alveolitis
Congenital anomalies	740-759	Heart defects, anencephalus, anomalies of respiratory system, anomalies of central nervous system
Certain conditions originating in perinatal period	760-779	Maternal hypertensive disorders, slow fetal growth and fetal malnutrition, birth trauma, disorders relating to short gestation and low birthweight
Symptoms and ill-defined conditions	780-799 798.0	General symptoms, nonspecific abnormal findings, ill-defined and unknown causes of mortality, sudden infant death syndrome
Accidents	800-949	Poisoning, falls, motor vehicle accidents, fatalities due to natural and environmental factors
Motor vehicle	810-825	
Drowning	830,832,910,984	
Suicide	950-959	
Homicide	960-969	

* Codes introduced by the National Center for Health Statistics in January 1987.

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PART I: HEALTH STATUS

NATALITY

The number of babies born in Arizona in 1987 was 63,320, the largest number of births recorded in the state's history. This number of live births resulted in an increase of one percent in both the state's birth rate per 1,000 population (Table 1-1) and the fertility rate per 1,000 women 15 to 44 years of age (Table 1-2) between 1986 and 1987. Arizona's 1987 birth rate exceeded the U.S. 1987 birth rate by at least 14 percent as it has annually throughout this decade.[a] For every 10,000 population in 1987, 183 babies were born in Arizona compared to 157 in the United States (Table 1-1).

Birth rates in 1987 varied from a low of 12.3 to a high of 29.7 among Arizona counties, a more than twofold difference. Compared to the state rate, birth rates were at least 20 percent lower in Yavapai, Greenlee, La Paz and Gila counties and at least 20 percent greater in Apache, Navajo and Yuma counties. The 1986 to 1987 increase in birth rate for eight rural counties did not elevate the 1987 rate over the 1982 rate for seven.

Coconino, Maricopa and Yuma counties had higher birth rates in 1987 than 1982. The six-year temporal trends in birth rate of the two metropolitan counties differed. Pima county's birth rate exceeded the U.S. rate from 1982 to 1986 but equalled it in 1987. In contrast, the annual birth rate of Maricopa county consistently exceeded the national rate.

Since 1972, the U.S. annual total fertility rate has been below the level considered necessary for a given generation to exactly replace itself in the population (2,110.0).[1] Arizona's annual total fertility rate has exceeded the replacement value in four of the past six years and was highest in 1987 (Table 1-2). The birth rate of women in their late thirties increased the most from 1986 to 1987 among the age groups. The 1987 birth rates of adolescents (15-19 year olds), 25 to 29 year old women, 30 to 34 year old women and 35 to 39 year old women were the highest of the six-year period.

Unfortunately, the 1987 historical high in number of births was accompanied by no improvement in babies' health status due to the 1986 to 1987 rise in the ratio of low birthweight (LBW or 2,500 and less grams) infants among live births (Table 1-3). One had to look back to 1975 to find a LBW ratio for Arizona equal to the 1987 ratio. In 1975 and 1987, 65 of every 1,000 infants born were LBW. However, births grew 60 percent from 1975 to 1987. This meant that 1,544 more LBW babies entered life with poorer chances for survival and healthy development[2] than normal weight infants in 1987 than 1975.

The proportions of babies born preterm, i.e. before 37 weeks of gestation, were 12.5 and 12.6 percent in 1986 and 1987 respectively. The Arizona percent of premature births was greater than the U.S. percent of 10.0 in 1986, the latest year with national data available. Nearly 30 percent of babies born prematurely in 1987 were LBW. Research[3] has indicated that prematurity is the prime governor of LBW in developed countries. A majority (57.5 percent) of Arizona's LBW infants in 1987 were premature.

a The 1980 and 1981 birth rates for Arizona both equaled 18.4 and for the United States were 15.8 and 15.9 respectively.

1 National Center for Health Statistics: Advance report of final natality statistics, 1986. Monthly Vital Statistics Report, 37(3), July 12, 1988.

2 McCormick MC: The contribution of low birthweight to infant mortality and childhood morbidity. N Engl J Med 1985; 312: 82-90.

3 Kramer MS: Intrauterine growth and gestational duration determinants. Pediatrics 1987; 80: 502-511.

The proportion of births to unmarried women doubled from 13.6 percent in 1975 to 27.1 percent in 1987. The doubling meant that 11,980 more babies were born to single mothers in 1987 than 1975, with over 1,500 more occurring in 1987 than 1986. The 1987 percent of births to single mothers exceeded the 26.8 percent projected for 1990.[4]

The U.S. percentages of births to unmarried women in 1985 (22.0 percent) and 1986 (23.4 percent) were lower than the corresponding values for Arizona. Among the 50 states and the District of Columbia in 1986, the latest year with comparative state data available,[5] Arizona ranked 14th in the proportion of all births to unmarried women, third in the percent of white births to unmarried women and 36th in the proportion of Black births to unmarried women. Less than one-tenth (9.3 percent) of babies born to unmarried women in Arizona were Black compared to 43.3 percent nationally.

Age-specific proportions of births to unmarried women decrease as the age of women giving birth increases. In 1987, the percent of births to unmarried women went from a high of 94.4 for girls younger than 15 years old to 77.4 for 15-17 year olds, 56.6 for 18-19 year olds, 31.6 for 20-24 year olds, 17.0 for 25-29 year olds and 12.9 for women 30 years of age or older. Girls and women younger than 25 years of age accounted for a minority (44.4 percent) of all births but 68.7 percent of the births to unmarried women in 1987.

Other demographic characteristics available from birth records on women giving birth were either stable or slightly improved from 1986 to 1987. The percent of women giving birth with less than 9 years of education fell from 7.1 percent in 1986 to 6.8 percent in 1987. Females less than 20 years of age accounted for 13.8 percent of births in both years. The distribution of births by maternal ethnicity was constant: 63 percent to white non-Hispanic women; 23 percent to women of Hispanic origin of all races; 4 percent to Black women; 9 percent to Native American women; and 1 percent to other race women.

The percent of women giving birth after receiving less than 5 prenatal visits during pregnancy rose from 8.4 percent in 1986 to 9.0 percent in 1987.[6] The risk of a LBW baby among women who received less than 5 prenatal visits during pregnancy was slightly lower in 1987 (12.9 percent) than in 1986 (13.2 percent). In contrast, from 1986 to 1987 the risk of a LBW baby rose for women who had 5 to 8 prenatal visits (8.1 and 8.6 percent respectively) and for women giving birth after 9 or more prenatal visits during pregnancy (4.7 and 5.0 percent respectively). Less than one in five LBW babies (17.9 percent) were born to women who received less than 5 prenatal visits during pregnancy in 1986 and 1987.

A lower percent of women began prenatal care during the first trimester of pregnancy in 1987 (68.7 percent) than 1986 (72.0 percent). Receipt of early prenatal care has been lower annually among women giving birth in Arizona than in the U.S. during this decade. The annual percent of Arizona women giving birth with early prenatal care varied from a low of 68.7 in both 1980 and 1987 to a high of 73.5 in 1982.[7] In contrast, since 1980 at least 76 percent of U.S. women giving birth received early prenatal care.[8]

4 Gersten JC, Teitelbaum F, Chapin C: Risk factors for low birthweight babies: The Arizona Experience, 1969 to 1983. Research Notes, March 1985, Arizona Dept. of Health Services.

5 See report referenced in footnote #1.

6 Saunders SE, Zipsnis K: Arizona Perinatal Statistics: A Report on Prenatal Care, Low Birth Weight, and Infant Mortality. Phoenix, Arizona Department of Health Services, December 1987.

7 See report referenced in footnote #6.

8 See report referenced in footnote #1.

TABLE 1-1

BIRTH RATES[1] BY ARIZONA COUNTY OF RESIDENCE, ARIZONA AND UNITED STATES 1982-1987

AREA	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
Apache	33.1	31.4	34.9	32.9	29.0	29.7	+ 2.4
Cochise	17.3	17.2	17.7	16.2	15.6	16.0	+ 2.6
Coconino	21.2	22.2	22.0	22.6	20.5	21.8	+ 6.3
Gila	21.2	17.5	17.7	16.8	15.7	14.2	- 9.6
Graham	19.6	18.0	18.6	17.4	16.1	18.0	+11.8
Greenlee	19.5	15.4	17.1	18.5	11.1	12.9	+16.2
Maricopa	17.8	17.6	17.7	18.8	18.5	18.4	- 0.5
Mohave	15.5	15.5	15.2	13.3	13.8	14.8	+ 7.2
Navajo	26.6	26.5	26.3	26.2	25.6	26.2	+ 2.3
Pima	16.1	16.5	16.0	16.5	16.2	15.6	- 3.7
Pinal	20.5	19.3	18.8	20.5	19.8	19.8	0.0
Santa Cruz	22.3	20.6	22.8	19.3	18.3	18.7	+ 2.2
Yavapai	14.8	14.0	12.3	12.4	12.3	12.3	0.0
Yuma[2]	20.0	20.1	20.4	21.8	22.4	22.0	- 1.8
La Paz	NA	17.3	14.5	16.3	15.2	14.0	- 7.9
ARIZONA	18.2	18.0	17.9	18.6	18.1	18.3	+ 1.1
U.S.	15.9	15.5	15.5	15.8	15.5	15.7	+ 1.3

1 Rates are presented per 1,000 population.
2 La Paz county included in Yuma county until January 1, 1983.

SOURCE: U.S. data from the National Center for Health Statistics; rates for 1986 and 1987 are provisional and rates for 1982-1985 are final.

TABLE 1-2

GENERAL FERTILITY RATE,* TOTAL FERTILITY RATE,** AND AGE-SPECIFIC LIVE BIRTHS RATES,*** ARIZONA, 1981-1987

YEAR	GENERAL FERTILITY RATE	TOTAL FERTILITY RATE	AGE-SPECIFIC BIRTH RATES BY AGE OF MOTHER							
			UNDER 15	15-19	20-24	25-29	30-34	35-39	40-44	45 AND OVER
1981	79.0	2,099	1.1	65.8	134.9	119.7	67.9	24.9	5.3	0.2
1982	78.7	2,119	1.2	67.4	137.0	119.9	67.5	25.5	5.0	0.4
1983	77.1	2,078	1.1	65.9	132.8	117.2	67.6	25.6	5.2	0.3
1984	77.2	2,098	1.0	63.6	137.4	116.7	70.1	25.5	5.0	0.3
1985	79.6	2,190	0.9	67.0	144.8	118.8	73.8	27.0	5.5	0.2
1986	78.2	2,159	1.3	66.7	142.9	117.8	74.1	23.7	5.2	0.2
1987	79.0	2,201	1.2	69.1	142.5	122.6	74.7	29.3	5.2	0.3

* The general fertility rate is the total number of live births per 1,000 women of childbearing age.

** The total fertility rate is the sum of each age-specific live birth rate multiplied by the number of years in the age group (five years in this case).

*** The age-specific live birth rate is the number of live births per 1,000 women in a specific age group. For women under 15, the rate is calculated using the female population 10-14 years of age. For women over 44 the rate is calculated using the female population 45-49 years of age.

TABLE 1-3

LOW-BIRTHWEIGHT BIRTH RATIOS* BY COUNTY OF RESIDENCE
ARIZONA, 1970-87

County of Residence	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	73.8	64.8	62.7	62.1	62.5	61.1	61.7	60.1	58.4	60.5	61.3	62.5	62.2	64.9
Apache	74.5	64.9	63.1	65.5	78.2	58.2	60.2	64.8	63.4	62.1	60.0	73.9	73.4	64.8
Cochise	83.6	87.0	69.6	79.8	73.5	79.0	72.6	74.1	71.4	90.1	77.3	66.7	57.1	67.9
Coconino	88.8	69.1	57.3	66.2	61.7	71.6	61.4	64.6	54.3	66.4	62.3	67.8	61.8	57.3
Gila	53.4	69.1	91.6	76.2	65.4	67.7	53.9	44.7	66.7	45.4	61.0	56.1	80.0	56.2
Graham	102.4	68.4	67.6	47.8	52.0	56.4	54.7	84.5	47.0	46.0	29.2	71.4	73.4	33.7
Greenlee	73.3	57.2	96.7	53.2	58.4	45.6	51.5	50.2	43.0	54.1	51.3	43.5	37.7	56.5
La Paz	NA	NA	NA	NA	NA	NA	NA	NA	NA	105.9	51.3	68.4	83.7	50.5
Maricopa	73.4	64.7	61.1	60.8	59.4	60.2	60.8	59.9	57.9	58.9	62.8	62.0	63.2	65.9
Mohave	55.9	73.4	71.1	71.2	79.2	62.2	66.6	53.0	81.3	56.2	66.8	53.7	68.5	68.8
Navajo	81.5	75.4	56.5	67.9	66.5	62.5	62.1	66.6	50.5	53.4	57.4	57.5	58.5	68.1
Pima	72.3	59.6	64.2	61.3	63.7	62.8	62.6	60.1	55.8	61.8	58.1	63.2	58.2	63.6
Pinal	70.1	67.8	62.3	62.0	71.2	64.7	67.4	63.2	72.5	61.0	55.7	66.9	67.2	68.2
Santa Cruz	64.0	49.9	35.9	42.4	52.3	54.2	66.1	40.5	65.2	52.5	31.3	87.9	69.4	65.8
Yavapai	57.1	52.3	72.4	55.1	60.1	53.8	60.8	50.1	61.9	70.7	72.1	63.4	54.9	67.5
Yuma	73.2	55.3	62.5	59.3	59.2	49.2	60.2	49.4	48.9	55.9	58.8	47.4	49.3	58.9

* Per 1,000 live births

TOTAL MORTALITY

The number of Arizona residents who died increased from 21,951 in 1982 to 26,670 in 1987. The increase was largely due to the aging population. Age-adjustment of death rates controls for differences in the age composition of populations between time periods or between regions, genders and other relevant demographic variables. This process makes age-adjusted mortality rates better indicators than crude death rates of temporal changes and differences among diverse populations or subgroups of the population. All mortality rates discussed in this section are age-adjusted. Therefore, the reader should understand that the term age-adjusted precedes the word rate even though it was eliminated to make reading easier.

Total mortality rates for Arizona and the United States declined 3.9 and 3.2 percent respectively from 1982 to 1987 (Table 2-1). However, the national mortality rate annually decreased, while the Arizona annual rates changed erratically. Arizona's 1987 mortality rate was higher than its 1983, 1985 and 1986 rates and the 1987 U.S. rate.

Death rates from diseases of the heart, malignant neoplasms, suicide and diabetes increased a minimum 2.0 percent from 1986 to 1987. The increase in the Arizona death rate from heart disease departed from the nearly continuous annual declines in mortality seen during the past two decades. In contrast, the increase in the cancer death rate sustained the trend of small annual rises seen since 1981.[b] Despite these increases, Arizonans in 1987 were still less likely to die from either of these causes than their national counterparts. However, the opposite temporal trends of the two causes over the six years narrowed the differential risk of death from heart disease versus cancer from 49.7 percent greater in 1982 to 25.9 percent greater in 1987.

The one-year increase in suicide mortality made the 1987 rate the highest suicide death rate ever recorded in the state's history. The risk of death from suicide has been higher in Arizona relative to the nation since 1970[9] but the elevation grew from 44.8 percent greater in 1982 to 65 percent greater in 1987. Arizona's 1987 death rate from self-inflicted intentional injuries (19.3) was almost identical to the U.S. rate of death from unintentional injuries incurred in motor vehicle accidents (19.7).

Diabetes, the eighth leading cause of death in Arizona, alternated between annual increases or decreases in mortality rate from 1982 to 1987. The 1986 to 1987 increase maintained this pattern, with the 1987 rate of 10.0 well within the narrow range (9.0-10.5) of annual fluctuation. In contrast, the much reduced alcoholism death rate seen in 1986 was replicated in 1987.

From 1970 to 1980, the atherosclerosis mortality rate declined from 9.2 to 5.5, paralleling the decline in heart disease mortality. Since 1980 no further improvement in atherosclerosis mortality has occurred, unlike the trend for heart disease. Instead, the atherosclerosis mortality rate has fluctuated annually from 5.3 to 5.8.

A decline from 1986 to 1987 reduced the 1987 death rate from unintentional injuries, the third leading cause of death in Arizona, by 4 percent from 1982. The two components, unintentional injury deaths from motor vehicles or from other events, differed temporally. The mortality rate of the motor-vehicle related component was 7.3 percent higher while the rate of the other component was 17.8 percent lower in 1987 than 1982.

b The 1981 cancer mortality rate was 120.0.

9 Gersten JC, Teitelbaum F, Chapin C: Suicide in Arizona. Research Notes, June 1986, Arizona Department of Health Services.

The Arizona injury death rate from motor vehicles was at least 1.25 times greater than the U.S. rate annually. In contrast, annual unintentional injury death rates from events such as fires, falls and drownings were never 25 percent higher in Arizona than the nation during these six years. Since 1984, Arizonans had at least a 59 percent greater risk of dying from a motor vehicle-related injury than from other types of injury.

Annual mortality rates of cerebrovascular diseases or stroke steadily declined in the nation and Arizona (except for a slight rise in 1984) since 1982, resulting in 1987 mortality rates which were 15.9 and 10.7 percent lower respectively. Arizonans had about a 10 percent lower chance of dying from a stroke than their national counterparts in each year. In contrast, residents of this state were at least 40 percent more likely to die from chronic obstructive pulmonary disease (COPD) than their U.S. peers in each year. Death rates from COPD were greater in 1987 than 1982 for both Arizona and the United States.

Gender

The 1987 total mortality rates of both genders in Arizona differed by no more than one percent from their respective 1982 rates (Table 2-2). Arizona women's mortality disadvantage with respect to their U.S. peers doubled from 1982 to 1987, while the mortality advantage of Arizona men compared to their national counterparts narrowed from 4.9 to 1.1 percent. The mortality risk of Arizona men more closely resembled that of their U.S. peers largely due to the 4.7 decline in U.S. male mortality. The 1987 mortality risk of Arizona females deviated most from their national counterparts due to a slight worsening in Arizona and a slight improvement in the U.S.

Declines in certain cause-specific mortality rates were counterbalanced by increases in other cause-specific rates for both genders. From 1982 to 1987 both males' and females' probability of death from diseases of the heart, unintentional injuries from other accidents, cerebrovascular diseases, alcoholism and homicide was lowered. These declines were offset by increases in both genders' death rates from malignant neoplasms, unintentional vehicular injuries, suicide, pneumonia/influenza, diabetes and infectious and parasitic diseases. The two genders differed in the changes from 1982 to 1987 in COPD and atherosclerosis death rates, with female rates increasing and male rates decreasing.

The six-year reduction in risk from heart disease was nearly equal for males and females (9.2 and 8.3 percent respectively), although both genders had an increase in death rate from this cause in the last year. Females' decrease in likelihood of death from injuries incurred in accidents not related to motor vehicles was almost twice as large as males' from 1982 to 1987 (26.3 and 14.2 percent respectively). Such unintentional injuries claimed female but not male lives at the lowest rate of the past six years. Females' greater improvement in death rates from unintentional injuries increased their mortality advantage compared to males to 65 percent in 1987.

The annual risk of death from stroke never differed between the two genders by more than 10 percent since 1982. The 1987 female death rate from stroke was the lowest and the male rate the second lowest of the six years after declines from 1982 to 1987 of 13.5 and 7.3 percent respectively. Both genders also had nearly equal reductions in death rates from alcoholism from 1982 to 1987 (26.6 and 23.1 percent respectively). However, the likelihood of death from alcoholism was over 100 percent greater for men than women annually. Males also had a 200 percent greater risk of being murdered than females in 1982 and 1987, despite a larger decline in male homicide death rates.

The 1982 to 1987 increases in mortality risk from cancer, pneumonia/influenza and diabetes were at least 50 percent greater for women than for men. Men in 1987 had

nearly the same risk of death from diabetes as women but their risk of death from either cancer or pneumonia/influenza was greater. In contrast, the 1982 to 1987 increases in male rates of death from unintentional motor vehicle injuries, suicide, and infectious and parasitic diseases exceeded the increases for females. The increase in male compared to female mortality rates from infectious and parasitic diseases was nearly six times larger primarily because Human Immunodeficiency Virus (HIV) infections were included in the category for the first time in 1987.[10] Men are disproportionately afflicted with HIV infections. Men's lives in 1987 also were ended by their intentionally inflicted trauma at the highest rate of the six-year period, a 237 percent more likely occurrence among men than women. In addition, males were 155 percent more likely to be a 1987 unintentional injury fatality from motor vehicle collisions than were women.

Female mortality rates from COPD increased annually to the 1987 high, while the 1987 male rate of death from COPD was the lowest rate of the six years. The opposite temporal trends halved the male to female differential in mortality from COPD from 160 percent greater in 1982 to 80 percent greater in 1987.

The male decline in atherosclerosis mortality from 1982 to 1987 occurred simultaneously with little temporal change in death rates from this disease for women. This made atherosclerosis the single leading cause of death in which the gender differential in mortality risk favored men. Men in 1987 were 17.2 percent less likely to die from this disease than were women.

County

Differences found in 1987 cause-specific mortality rates between the two metropolitan counties mainly disfavored Pima county residents compared to Maricopa county residents (Table 2-3). Pima county exceeded Maricopa county in its rates of death from unintentional injuries (15.8 percent), suicide (12.9 percent), alcoholism (63.6 percent) and atherosclerosis (107.5 percent). Only Maricopa county's mortality rate from pneumonia and influenza was at least 13 percent greater than Pima's rate. Cancer was the cause-specific mortality rate most similar for the two metropolitan counties.

Total 1987 mortality rates of the fifteen counties ranged from a low of 444.7 for Santa Cruz to a high of 825.7 for Gila county, an 86 percent difference. Residents of six counties had a 1987 mortality risk which exceeded the risk of both all state residents and U.S. residents by at least 15 percent. These six counties rank-ordered from greatest to lowest exceedance were Gila, Greenlee, Apache, La Paz, Navajo and Pinal. Residents of only one county, Santa Cruz, had chances for survival which were at least 15 percent better than residents of the state or nation.

Comparisons among counties in cause-specific mortality excluded those counties with a mortality rate for a cause based on less than ten deaths due to high unreliability of the estimated rate. No exclusion was necessary for the first and second leading causes of death, heart disease and cancer (Table 2-3). Gila county's highest heart disease mortality rate (256.8) among the 15 counties was 2.5 times higher than Apache county's lowest rate (103.0). Gila county also had the highest heart disease death rate in several earlier years of the decade and 1986 (192.6), but the 1987 rate was a 33 percent increase over the former high. Heart disease caused the death of Gila county residents at a rate more than

10 The inclusion conformed to practice initiated by National Center for Health Statistics: Annual summary of births, marriages, divorces, and deaths, United States, 1987. Monthly Vital Statistics Report, 36 (13), July 29, 1988.

50 percent higher than both the Arizona and U.S. rates. One county, Mohave, had a heart disease mortality rate which exceeded the state's rate by at least 15 percent. Deaths from heart disease occurred at a rate 15 percent lower than the rate for Arizona overall among residents of Apache, Coconino, Santa Cruz and Yuma counties.

Among counties, the Gila county cancer mortality rate (176.1) was 75.8 percent greater than Coconino county's lowest rate (100.2) and at least 32 percent greater than the Arizona and U.S. rates. Two other counties, Yavapai and Mohave, had cancer death rates elevated at least 15 percent above the state's rate. Cancer was a 15 percent lower threat to life for Coconino county, while Navajo, Cochise and Apache counties had cancer death rates 12 to 14 percent lower than their statewide peers.

Death rates from unintentional injuries among the 12 counties ranged from a low of 34.1 in Maricopa county to a high of 143.1 for Apache county, a more than fourfold difference. The incidence rate of unintentional injury fatalities was more than twice as great as the state's rate in Apache (233 percent higher), Navajo (146 percent higher) and Coconino (102 percent higher) counties. Pinal, Mohave, Yuma and Yavapai counties' mortality rates from this cause exceeded the state's rate by at least 15 but no more than 70 percent. Only Maricopa county had a mortality rate from all unintentional injuries at least 15 percent lower than the state's rate.

Unintentional injuries caused by vehicular events rather than events such as fires, falls and drownings dominated the above observations concerning all unintentional injuries. The highest vehicular injury death rate among the 11 counties compared occurred in Apache county (91.8) and the lowest in Maricopa county (20.3). All rural counties in the comparison exceeded the state rate. The degree of exceedance was greatest for Apache (248 percent) followed by Navajo (142 percent), Pinal (104 percent), Coconino (93 percent), Mohave (33 percent), Gila (31 percent), Yavapai (27 percent), Cochise (27 percent) and Yuma (25 percent) county. The 1987 occurrence of the highest vehicular fatality rate in Apache county replicated annual findings seen for more than a decade.

However, this was the first time that the lowest motor vehicle accident death rate among the counties was seen in a metropolitan county, namely Maricopa. Indeed, Maricopa county's mortality rate from this cause was 23 percent lower and Pima county's rate was 14 percent lower than the state rate. The mortality rates for the two metropolitan counties combined versus a combination of all other counties were 21.9 and 40.9 respectively. Unintentional injuries in motor vehicle accidents claimed the lives of rural residents at a rate 86.8 percent higher than the rate for metropolitan area residents. The rural vehicular fatality rate exceeded the U.S. rate by a seven times greater amount than did the metropolitan rate (119 and 17 percent respectively). If residents of the metropolitan counties had experienced the same death rate from motor vehicle accidents as rural residents in 1987, 576 more people in Maricopa and Pima counties would have died from a fatal injury incurred in a vehicular event. Conversely, if the metropolitan rate of death from these types of injuries had applied to rural residents in 1987, 177 fewer rural residents would have died in that year.

The unintentional injury death rate from other accidents was again highest in Apache county (51.3) but Cochise (8.1) not Maricopa county had the lowest rate. Compared to the state rate, Apache county's rate was 209 percent greater, Navajo county's 152 percent greater and Coconino county's 117 percent greater. Yuma and Mohave counties exceeded the state rate by at least 15 but no more than 52 percent. Residents of Cochise, Graham and Maricopa counties were at least 15 percent less likely to die in a drowning, fall, fire, or from the unintentional ingestions of poisons or drugs, the major events accounting for these unintentional injury fatalities.

Comparisons on stroke mortality ranged from a low rate of 22.9 for Pinal county to a high of 49.6 for Gila county. The latter county, of course, exceeded the state rate of deaths from stroke by at least 15 percent as did Santa Cruz county. Gila county also had the highest death rate from COPD (54.1), exceeding the state rate by 104 percent. La Paz, Yavapai, Pinal, Yuma and Mohave counties' death rates from COPD were at least 15 percent higher than the state rate. Death was 15 percent less likely to be caused by a stroke in Pinal and Yuma counties or by COPD in Coconino and Cochise counties.

Death by one's own hand also occurred at the highest rate in Gila county (37.7) among the ten counties compared. Suicide ended life at a 2.4 times higher rate in Gila county than in Cochise county which had the lowest rate (15.8). Residents of Gila county killed themselves at a rate 95 percent higher than the state and 186 percent higher than the U.S. Rates were not elevated to this degree but were at least 15 percent higher than the already-high state rate in Yavapai, Mohave and Navajo counties. Only Cochise county had at least a 15 percent lower probability of suicide fatalities than the state.

Pneumonia/influenza deaths occurred at the highest rate in Navajo county (32.2) and lowest rate in Pima county (14.2) among the ten counties compared. Navajo county's mortality rate from this cause was almost twice as high as the state rate. Two counties, Yavapai and Pinal, were at least 15 percent higher than the state rate but no county was below the state rate by this amount.

Diabetes was the last of the leading causes of death on which a majority of the counties could be compared. Mortality rates from both alcoholism and atherosclerosis were based on less than 10 deaths in a majority of the counties. The highest death rate from diabetes was seen in Apache county, with an elevation above the state rate of 188 percent. Gila and Pinal counties closely followed with elevations of 137 and 118 percent respectively. Smaller elevations of 15 to 66 percent were noted for Cochise, Yavapai and Navajo counties. The lowest mortality rate from diabetes was recorded in Mohave county and it was the only rate at least 15 percent below the state rate.

Counties were mentioned in the above discussion of cause-specific mortality if they met two criteria. One, the county's mortality rate for a cause was based on at least 10 deaths and two, the rate was either the highest/lowest among the counties or at least 12 to 15 percent above/below the state rate. The following definitions were made to summarize the findings. A county was considered to have the highest or lowest mortality risk from a cause if it had the highest or lowest mortality rate among the counties respectively. Higher mortality risk applied when a mortality rate was not the highest among the counties but did meet the minimum percent exceedance relative to the state rate. Conversely, lower mortality risk applied to a rate not the lowest among the counties but at least 12 to 15 percent below the state rate. (All summary comparisons are in terms of the state not the U.S. rate. All counties with the requisite number of deaths had rates in excess of the U.S. rate for deaths from motor-vehicle unintentional injuries, suicide, pneumonia/influenza and atherosclerosis.) When a county's rate met none of these definitions but was based on the specified number of deaths, the mortality risk was called average or at the level of all residents of the state.

Eleven causes were considered. Less than 15 counties appear in a summary for a cause when rates for some counties were based on less than 10 deaths. A final caution is that the term **lowest or lower mortality risk does not mean that persons with the disease do not die from it.** A county relative to the other counties may have low rates of death from diseases which occur mainly at older ages (e.g. heart disease, cancer and stroke) because it has high death rates from causes which primarily occur at younger ages (e.g. unintentional

injuries). In other words, the number of survivors in the population who may acquire the diseases of older age is seriously reduced by the high rate of deaths at younger ages.[11] The summary for each cause is given below.

Diseases of the heart

Highest mortality risk:	Gila county
Higher mortality risk:	Mohave county
Lowest mortality risk:	Apache county
Lower mortality risk:	Coconino, Santa Cruz and Yuma counties
Average mortality risk:	Cochise, Graham, Greenlee, LaPaz, Maricopa, Navajo, Pima, Pinal and Yavapai counties

Cancer

Highest mortality risk:	Gila county
Higher mortality risk:	Mohave and Yavapai counties
Lowest mortality risk:	Coconino county
Lower mortality risk:	Apache, Cochise and Navajo counties
Average mortality risk:	Graham, Greenlee, LaPaz, Maricopa Pima, Pinal, Santa Cruz and Yuma counties

Stroke

Highest mortality risk:	Gila county
Higher mortality risk:	Santa Cruz county
Lowest mortality risk:	Pinal county
Lower mortality risk:	Yuma county
Average mortality risk:	Cochise, Coconino, Maricopa, Mohave Navajo, Pima and Yavapai counties

Unintentional Injuries: Motor Vehicle Accidents

Highest mortality risk:	Apache county
Higher mortality risk:	Cochise, Coconino, Gila, Mohave Navajo, Pinal, Yavapai and Yuma counties
Lowest mortality risk:	Maricopa county
Lower mortality risk:	Pima county
Average mortality risk:	No county

Unintentional Injuries: Accidents Other than Motor Vehicle

Highest mortality risk:	Apache county
Higher mortality risk:	Coconino, Mohave, Navajo and Yuma counties
Lowest mortality risk:	Cochise county
Lower mortality risk:	Graham and Maricopa counties
Average mortality risk:	Pima, Pinal and Yavapai counties

[11] See report referenced in footnote #10.

Chronic Obstructive Pulmonary Disease

Highest mortality risk:	Gila county
Higher mortality risk:	LaPaz, Mohave, Pinal, Yavapai and Yuma counties
Lowest mortality risk:	Coconino county
Lower mortality risk:	Cochise and Maricopa counties
Average mortality risk:	Pima county

Pneumonia/Influenza

Highest mortality risk:	Navajo county
Higher mortality risk:	Apache, Pinal and Yavapai counties
Lowest mortality risk:	Pima county
Lower mortality risk:	No county
Average mortality risk:	Cochise, Coconino, Maricopa, Mohave and Yuma counties

Diabetes

Highest mortality risk:	Apache county
Higher mortality risk:	Cochise, Gila, Navajo, Pinal and Yavapai counties
Lowest mortality risk:	Mohave county
Lower mortality risk:	No county
Average mortality risk:	Maricopa and Pima counties

Suicide

Highest mortality risk:	Gila county
Higher mortality risk:	Mohave, Navajo and Yavapai counties
Lowest mortality risk:	Cochise county
Lower mortality risk:	No county
Average mortality risk:	Apache, Coconino, Maricopa, Pima and Pinal counties

Alcoholism

Highest mortality risk:	Pinal county
Higher mortality risk:	Mohave and Pima counties
Lowest mortality risk:	Maricopa county
Lower mortality risk:	No county
Average mortality risk:	Yavapai county

Atherosclerosis

Highest mortality risk:	Mohave county
Higher mortality risk:	Maricopa, Pima, Pinal, Yavapai and Yuma counties
Lowest mortality risk:	No county
Lower mortality risk:	No county
Average mortality risk:	No county

TABLE 2-1

TRENDS IN AGE-ADJUSTED MORTALITY RATES[1] IN ARIZONA AND THE UNITED STATES BY THE TEN LEADING CAUSES OF DEATH[2], 1982-1987

CAUSE	1982		1983		1984		1985		1986		1987		Percent Change 1986-1987	
	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.	AZ	U.S.
Diseases of heart	182.3	190.5	171.2	188.5	166.9	183.3	162.5	181.7	157.9	175.4	161.9	169.9	+2.5	-3.1
Malignant neoplasms	121.8	132.5	122.3	132.3	123.9	133.1	125.2	132.5	126.1	132.5	128.6	133.1	+2.0	+0.5
Accidents and adverse effects	44.8	36.6	40.8	34.9	44.8	35.6	42.9	34.3	44.3	35.5	43.0	34.6	-2.9	-2.6
Motor vehicle	24.6	19.3	22.7	18.1	27.5	19.2	27.0	18.3	27.9	19.8	26.4	19.7	-5.4	-0.5
Other accidents	20.2	17.3	18.1	16.8	17.3	16.4	15.9	16.0	16.4	15.7	16.6	14.9	+1.2	-5.1
Cerebrovascular diseases	30.7	35.8	31.0	34.3	31.9	33.9	29.1	32.3	27.5	30.4	27.4	30.1	-0.4	-1.0
Chronic obstructive pulmonary disease	24.2	16.2	24.7	17.6	26.4	18.0	26.3	18.6	27.6	18.5	26.5	18.7	-4.0	+1.1
Pneumonia and influenza	14.3	10.9	12.7	11.2	16.2	12.2	15.0	13.2	16.6	13.6	15.6	13.2	-6.0	-2.9
Suicide	16.8	11.6	16.6	11.7	16.5	11.6	17.1	11.2	17.8	12.0	19.3	11.7	+8.4	-2.5
Diabetes	9.0	9.6	10.5	9.8	9.6	9.9	10.0	10.1	9.5	9.4	10.0	9.6	+5.3	+2.1
Alcoholism	10.7	*	9.0	*	10.8	*	10.0	*	8.1	*	8.0	*	-1.2	
Atherosclerosis	5.6	4.8	5.7	4.5	5.8	4.1	5.8	4.0	5.3	3.6	5.4	3.7	+1.9	+2.8
ALL CAUSES	570.6	553.8	547.3	549.6	552.0	547.7	544.2	545.9	543.6	540.2	548.4	536.2	+0.9	-0.7

[1] Rates per 100,000 population.

[2] Leading causes are those ten causes with the greatest number of deaths according to Arizona Vital Statistics for the 1982-87 period.

* Comparable categories not available.

Source: U.S. data furnished by the National Center for Health Statistics; 1987 data are provisional.

TABLE 2-2

TOTAL AGE-ADJUSTED MORTALITY RATES[1] FOR LEADING CAUSES OF DEATH[2]
BY GENDER IN ARIZONA, 1982-1987

CAUSE	1982		1983		1984		1985		1986		1987		Percent Change 1986-1987	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Diseases of heart	130.8	232.5	126.5	223.9	122.9	218.9	121.5	210.5	117.5	206.0	120.0	211.2	+ 2.1	+ 2.6
Malignant neoplasms	101.5	147.2	105.6	146.2	105.6	147.6	107.3	148.4	108.0	150.0	108.9	154.3	+ 0.8	+ 2.9
Accidents	25.6	63.5	23.9	60.1	23.6	66.4	23.9	62.3	25.4	63.5	23.6	62.7	- 7.1	- 1.3
Motor vehicle	13.8	34.7	12.3	33.2	14.3	40.0	14.3	40.0	16.5	39.4	14.9	38.0	- 9.7	- 3.6
Other accidents	11.8	28.8	11.7	26.9	9.3	25.5	9.6	22.3	8.8	24.0	8.7	24.7	- 1.1	+ 2.9
Chronic obstructive pulmonary disease	14.1	36.8	15.9	35.7	17.3	37.6	18.9	35.9	19.1	38.4	19.4	35.5	+ 1.6	- 7.6
Cerebrovascular disease	31.0	30.1	31.1	30.9	31.1	32.8	27.9	30.7	27.6	27.5	26.8	27.9	- 2.9	+ 1.5
Suicide	8.8	25.4	8.5	25.2	7.2	26.2	7.2	27.5	8.8	27.2	8.9	30.0	+ 1.1	+10.2
Pneumonia and influenza	11.2	18.0	9.7	16.4	13.1	20.1	12.5	18.0	14.2	19.6	13.1	18.7	- 7.7	- 4.6
Alcoholism	6.5	15.4	5.6	14.3	6.6	15.3	6.7	14.5	4.0	12.6	5.0	11.3	+25.0	-10.3
Homicide	4.0	14.7	3.5	13.5	4.2	13.5	4.6	11.8	4.7	15.0	3.9	12.5	-18.0	-16.7
Diabetes	8.6	9.3	9.9	11.3	8.8	10.5	9.6	10.7	8.4	10.8	9.8	9.9	+16.7	- 8.3
Infectious and parasitic diseases	5.6	7.2	5.4	6.4	5.6	6.7	5.8	8.6	5.5	7.9	5.8	8.7	+ 5.5	+10.1
Atherosclerosis	5.6	5.6	5.7	5.6	6.2	5.2	6.0	5.5	5.2	5.0	5.8	4.8	+11.2	- 4.0
All Causes AZ	421.2	698.5	420.3	685.5	425.6	698.6	418.0	686.9	420.1	686.2	424.3	690.8	+ 1.0	+ 0.7
All Causes U.S.	411.2	733.1	408.5	727.8	409.5	721.3	408.5	717.4	405.4	707.1	404.5	698.6	- 0.2	- 1.2

NOTE: 1987 U.S. data are provisional.

1 Rates are presented per 100,000 population.

2 Leading causes are those 12 causes with the greatest total number of deaths for males for the 1982 to 1987 time period.

TABLE 2-3

AGE-ADJUSTED MORTALITY RATES FOR TEN LEADING CAUSES OF DEATH BY COUNTY, ARIZONA, UNITED STATES: 1987

Cause of Death	U.S.[a]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	536.2	548.4	652.7	535.6	512.3	825.7	573.8	654.4	645.3	530.9	623.8	644.8	549.7	631.9	444.7	607.6	518.0
Heart Disease	169.9	161.9	103.0	175.6	125.4	256.8	165.7	185.3	141.4	161.3	189.6	158.7	167.1	178.5	126.4	159.5	127.9
Cancer	133.1	128.6	113.5	112.9	100.2	176.1	143.5	147.3	132.8	127.7	155.7	110.0	126.6	135.1	123.9	156.2	133.8
Stroke	30.1	27.4	11.8*	29.8	24.3	49.6	25.6*	66.4*	25.2*	27.7	28.6	29.3	26.9	22.9	32.7	30.5	23.7
Accidents	34.6	43.0	143.1	41.6	87.0	48.9	38.0	91.6*	45.2*	34.1	60.5	105.8	39.5	72.9	30.9*	51.9	55.3
Motor Vehicles	19.7	26.4	91.8	33.5	51.0	34.5	25.4*	69.2*	10.8*	20.3	35.2	63.9	22.8	54.0	14.0*	33.6	33.0
Other	14.9	16.6	51.3	8.1	36.0	14.4*	12.6	22.4*	34.4*	13.8	25.3	41.9	16.7	18.9	16.9*	18.3	22.3
Chronic Obstructive Pulmonary Disease	18.7	26.5	11.8*	19.7	18.4	54.1	22.7*	40.3*	36.5	25.9	30.5	11.6*	26.8	34.1	13.5*	35.8	30.6
Influenza and Pneumonia	13.2	15.6	21.1	17.1	16.7	12.5*	9.6*	8.7*	12.1*	16.0	16.2	32.2	14.2	18.2	7.6*	18.8	14.7
Diabetes	9.6	10.0	28.8	11.7	7.5*	23.7	24.5*	34.8*	14.8*	8.8	5.7	16.6	9.2	21.8	18.1*	13.3	5.0*
Suicide	11.7	19.3	20.3	15.8	21.4	37.7	17.7*	39.9*	63.2*	17.8	27.3	22.7	20.1	20.8	7.8*	29.1	7.9*
Alcoholism	NA	8.0	26.5*	9.0*	9.0*	9.9*	14.0*	-	10.8*	6.6	11.2	9.7*	10.8	15.8	-	8.9	7.1*
Atherosclerosis	3.7	5.4	3.7*	2.9*	5.7*	9.2*	2.4*	-	5.8*	4.0	9.5	3.1*	8.3	6.6	2.5*	7.1	9.3

[a] Provisional

* Less than ten deaths for a specific cause. All rates per 100,000 population.

AGE-SPECIFIC MORTALITY

Infant Mortality

The 1987 rate of infants dying before their first birthday continued to be lower in Arizona than in the United States. Arizona's infant mortality rate (IMR) was unchanged from 1986 to 1987, while the national IMR declined (Table 3-1). From 1982 to 1987, IMRs in Arizona annually varied by no more than three deaths per 10,000 births compared to a variation in annual IMRs of 12 deaths per 10,000 births. In 1987 relative to 1982, 12 fewer infants died for every 10,000 born nationally compared to one more death for every 10,000 births in Arizona. Arizona and the U.S. differed less in infants' mortality risk in 1987 than in 1982.

Maricopa, Santa Cruz and Navajo counties had a 1987 infant mortality rate greater than the statewide rate and equal to or greater than the national IMR. The IMR has progressively increased in Maricopa, the county with the majority of births, since 1984. Maricopa's 1987 IMR of 10 infant deaths for every 1,000 births was the highest of the past six years. Moreover, Maricopa was the only county with both increases in annual IMRs since 1984 and a higher 1987 than 1982 rate.

Pima county showed a strikingly opposite trend. Its IMR annually declined from 1984 and its 1987 rate of 7.7 was the lowest recorded in the past 38 years. If infants living in Maricopa county had the same 1987 chances for survival as infants in Pima county, 146 infants would not have died. One other county, Apache, exhibited a temporal trend identical to Pima's, i.e. declining annual IMRs since 1984 and a 1987 rate the lowest in recorded time. Apache county recorded lower IMRs than Maricopa county in 1986 and 1987. All other counties were temporally erratic, with neither increases nor decreases consistently maintained during the decade. However, the high 1987 Santa Cruz IMR was clearly elevated from annual rates below 10 in the previous seven years.

Arizona's better IMR compared to the United States is a function of lower neonatal (before 28 days of age) not postneonatal (28 days to one year of age) mortality (Table 3-2). The state's neonatal mortality rate (NMR) was consistently less than the nation's during this decade, while annual postneonatal mortality rates (PNMR) equalled or exceeded the U.S. PNMR's. Since 1982, the Arizona NMR has been less than 6 neonatal deaths per 1,000 live births while the national NMR still has not dropped to this level. Since annual PNMRs for Arizona exceeded the nation's, infant deaths in the postneonatal period comprise a larger fraction of infant mortality in Arizona than in the country.

Approximately 63 percent of the neonates who died in 1987 resided in Maricopa county (Table 3-3). The 1987 NMR of Maricopa county was 10 percent higher than it was in 1986.[c] Pima's lower infant mortality rate relative to Maricopa county stemmed from both better neonatal and postneonatal survival of infants. In contrast, Apache county surpassed Maricopa county in infant survival despite a higher PNMR (5.9 vs. 3.6 respectively) because of a much lower NMR (2.7 vs. 6.4 respectively). Neonatal deaths were responsible for the high 1987 IMR of Santa Cruz county. Fortunately for babies, the number of infant deaths was less than 20 in 12 rural counties and less than 40 in one other rural county. However, from a statistical viewpoint, the low numbers make annual IMRs, and particularly NMRs and PNMRs, unreliable estimates with wide margins of error.

For this reason, a six-year rate (1982-1987) was calculated for the rural counties in order to permit some reasonably reliable comparisons among them. Even for six years, the sum

[c] The 1986 NMR of Maricopa County was 5.8.

of infant deaths was less than 40 for Gila, Graham, Greenlee, La Paz and Santa Cruz counties (Table 3-4). These counties thus were excluded from the following comparisons. Rural county IMRs varied from a low of 8.1 in Yuma county to a 38 percent higher rate of 11.2 in Navajo county. The IMR in Apache county differed little from Navajo county. The Yuma county IMR was distinctly below the other rural counties; the next lowest rural county IMR exceeded Yuma county's by 15 percent. Yet, neonatal mortality was not lowest in Yuma but in Coconino and Mohave counties. However, Yuma county had the lowest PNMR, while the other counties exceeded the 1987 state PNMR (3.5) by a minimum of 29 percent (Yavapai county) to a maximum of 77 percent (Apache county).

In 1987 for the first time in this decade,[d] sudden infant death syndrome (SIDS) was no longer the single leading cause (i.e. one ICD code) of infant death (Table 3-5). Low birthweight/short gestation now occupied that position. The mortality rate from low birthweight/short gestation grew in small annual increments from 0.6 in 1982 to 1.0 in 1986. From 1986 to 1987, the rate climbed sharply to 1.9, an increase of 90 percent. Low birthweight/short gestation was responsible for 2.7 times more infant deaths than any other condition originating in the perinatal period. The increasing LBW rate discussed in the natality section was exerting its effect by rising its proportional contribution to infant deaths. One in five infant deaths in 1987 was due to low birthweight/short gestation compared to a former high of one in ten deaths in 1986.

Among specified congenital anomalies which caused infants to die, anomalies of the circulatory system were the most important as they had been in the prior five years. However, they accounted for about one-half fewer deaths than did the second single leading cause of death among infants, SIDS. The IMR due to SIDS has never fallen below 1.4 in this decade. All other specified, i.e. excluding categories of other, causes of death not discussed to this point accounted for less than 1 infant death in 1,000 births.

Survival chances during their first year were unequal for infants of the four ethnic groups in Table 3-6. Hispanic infants had the best annual survival chances from 1985 to 1987, followed by white non-Hispanic, Native American and Black infants. In 1985, the Black IMR was 4 percent higher than the Native American IMR, 28 percent higher than the white non-Hispanic IMR and 59 percent higher than the Hispanic IMR. By 1987, the mortality disadvantage of Black infants was larger, having grown to 18, 77 and 95 percent greater than Native American, white non-Hispanic and Hispanic infants respectively.

From 1985 to 1987, the IMR of white infants declined, while the IMR of Black infants rose annually. The largest one-year change for both groups of infants occurred between 1985 and 1986. Hispanic and Native American infants had a decline in IMR in that one-year interval which was eliminated in the next year. Thus, the 1987 Hispanic IMR equalled the 1985 rate, while Native American infants died at a higher rate in 1987 than in 1985.

The mortality risk of male infants was greater than female infants in each of the three years (Table 3-6). The higher risk of death of male babies held in every year for each ethnic group, except for Black babies in 1987. Boy and girl Black babies died in infancy at identical rates in 1987. Overall, the two genders differed in their change in mortality risk from 1985 to 1987. Compared to 1985, the 1987 IMR for male babies was 7.0 percent lower while the 1987 IMR for female infants was 5.2 percent higher.

[d] The infant death rates from SIDS in 1980 and 1981 were 1.4 and 1.6 respectively.

TABLE 3-1

INFANT MORTALITY RATES* BY COUNTY OF RESIDENCE
ARIZONA AND UNITED STATES, 1950 - 1987

COUNTY	1950	1960	1965	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
U.S.	29.2	26.0	24.7	19.8	16.1	12.5	11.7	11.2	10.9	10.7	10.6	10.4	10.0**
ARIZONA	45.7	31.8	25.3	17.8	14.8	12.4	11.6	9.3	9.6	9.5	9.6	9.4	9.4
Apache	106.4	55.4	32.5	26.3	18.8	14.1	14.9	11.4	11.2	13.8	11.9	9.1	8.6
Cochise	34.0	26.7	32.7	14.1	15.9	12.1	13.4	9.0	12.8	14.2	9.6	5.2	6.8
Coconino	61.2	46.1	44.4	27.7	21.6	10.9	11.5	9.0	12.2	8.8	10.8	9.8	7.5
Gila	48.8	47.0	49.0	15.9	16.5	17.0	6.6	16.0	7.3	4.5	7.8	12.8	5.3
Graham	57.1	44.9	30.0	24.3	18.8	15.6	27.5	8.5	6.9	15.7	9.8	12.7	9.0
Greenlee	34.1	27.5	23.5	38.8	23.5	18.3	3.3	19.5	-	10.3	18.6	9.4	-
La Paz	NA	NA	NA	NA	NA	NA	NA	NA	33.9	5.1	25.6	-	5.1
Maricopa	37.3	26.9	20.9	15.5	14.4	13.4	12.0	9.3	9.2	8.9	9.4	9.6	10.0
Mohave	47.8	21.7	31.3	6.5	11.0	20.7	9.0	12.4	9.7	8.1	7.2	10.3	8.5
Navajo	107.3	64.4	45.2	29.0	20.2	14.2	16.0	9.6	12.0	9.7	13.7	6.3	15.6
Pima	28.7	27.3	18.4	17.3	11.1	8.1	9.2	8.3	9.7	9.9	9.1	9.0	7.7
Pinal	68.9	38.6	30.5	23.2	18.1	9.2	9.0	9.8	9.1	14.6	8.8	13.1	8.9
Santa Cruz	48.0	26.1	21.1	16.8	13.8	6.0	9.6	6.1	6.6	7.8	7.6	7.9	12.8
Yavapai	38.6	30.2	30.7	14.7	12.6	11.8	15.0	9.4	10.7	11.0	8.3	11.5	9.4
Yuma	50.5	32.9	31.3	19.4	15.5	14.6	11.3	8.4	8.3	6.9	9.7	6.1	9.1

* Per 1,000 live births

** Provisional

TABLE 3-2

INFANT, NEONATAL AND POSTNEONATAL MORTALITY RATES AND PERCENT POSTNEONATAL DEATHS, ARIZONA, UNITED STATES, 1950 - 1987

	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	Percent Change: 1950-70	1970-86	1986-87
UNITED STATES															
Infant mortality[1]	29.2	26.0	19.8	16.1	12.5	11.7	11.2	10.9	10.7	10.6	10.4	10.0	-32.2	-47.5	- 3.8
Neonatal mortality[1]	20.6	18.7	15.1	11.8	8.4	7.9	7.7	7.3	6.9	6.9	6.7	6.5	-26.7	-55.6	- 3.0
Postneonatal mortality[1]	8.6	7.3	4.7	4.3	4.1	3.8	3.5	3.6	3.8	3.7	3.7	3.5	-45.4	-21.3	- 5.4
Percent postneonatal deaths[2]	29.5	28.1	23.7	26.7	32.8	32.5	31.2	33.0	35.5	34.9	35.6	35.5	-19.7	+50.2	- 0.3
ARIZONA															
Infant mortality[1]	45.7	31.8	17.8	14.8	12.4	11.6	9.3	9.6	9.5	9.6	9.4	9.4	-61.1	-47.2	0.0
Neonatal mortality[1]	26.6	19.4	12.4	9.6	8.3	7.4	5.8	5.9	5.5	5.9	5.4	5.9	-53.4	-56.4	+ 9.3
Postneonatal mortality[1]	19.1	12.4	5.4	5.2	4.1	4.2	3.5	3.7	4.0	3.8	4.0	3.5	-71.7	-25.9	-12.5
Percent postneonatal deaths[2]	41.8	39.0	30.3	35.1	33.1	36.2	37.6	38.5	42.1	39.6	42.6	37.1	-27.5	+40.6	-12.9

1 Rates per 1,000 live births. The U.S. rates are from the National Center for Health Statistics: Annual Summary of Births, Marriages, Divorces and Deaths.

2 Total infant mortality = 100 percent

TABLE 3-3

NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY
BY COUNTY OF RESIDENCE WITH RATES
ARIZONA, 1987

County of Residence	INFANT DEATHS			RATES		
	Total	Neonatal	Post-Neonatal	Total	Neonatal	Post-Neonatal
ARIZONA	598	376	222	9.4	5.9	3.5
Apache	16	5	11	8.6	2.7	5.9
Cochise	11	10	1	6.8	6.2	0.6
Coconino	15	7	8	7.5	3.5	4.0
Gila	3	3	-	5.3	5.3	-
Graham	4	1	3	9.0	2.3	6.7
Greenlee	-	-	-	-	-	-
La Paz	1	1	-	5.1	5.1	-
Maricopa	368	236	132	10.0	6.4	3.6
Mohave	10	6	4	8.5	5.1	3.4
Navajo	31	17	14	15.6	8.6	7.1
Pima	84	54	30	7.7	4.9	2.8
Pinal	19	12	7	8.9	5.6	3.3
Santa Cruz	7	6	1	12.8	11.0	1.8
Yavapai	11	7	4	9.4	6.0	3.4
Yuma	18	11	7	9.1	5.6	3.5

* Per 1,000 live births

TABLE 3-4

SIX-YEAR RATES OF NEONATAL, POSTNEONATAL AND TOTAL INFANT MORTALITY BY RURAL COUNTIES, ARIZONA, 1982-1987

County of Residence	INFANT DEATHS			RATES		
	Total	Neonatal	Post-Neonatal	Total	Neonatal	Post-Neonatal
Apache	120	52	68	11.0	4.8	6.2
Cochise	91	61	30	9.7	6.5	3.2
Coconino	108	50	58	9.7	4.5	5.2
Gila	37	22	15	9.2	5.5	3.7
Graham	27	14	13	10.4	5.4	5.0
Greenlee	11	10	1	10.7	9.7	1.0
La Paz	16	9	7	14.8	8.3	6.5
Mohave	56	27	29	9.3	4.5	4.8
Navajo	128	59	69	11.2	5.2	6.0
Pinal	127	65	62	10.7	5.5	5.2
Santa Cruz	25	19	6	8.2	6.2	2.0
Yavapai	65	36	29	10.1	5.6	4.5
Yuma	91	54	37	8.1	4.8	3.3

* Rates calculated per 1,000 live births for the entire period, 1982-1987.

TABLE 3-5

INFANT MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES OF DEATH[2] ARIZONA, 1982 - 1987

CAUSE OF DEATH	ICD Codes	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
Certain conditions in perinatal period	760-779	3.5	3.6	3.4	3.4	3.8	3.9	+2.6
Low birthweight/ short gestation	765	0.6	0.7	0.8	0.9	1.0	1.9	+90.0
Respiratory distress syndrome	769	0.7	0.8	0.7	0.8	0.7	0.7	0.0
Other respiratory	770	0.6	0.6	0.9	0.5	0.7	0.4	-42.9
Intrauterine hypoxia or birth asphyxia	768	0.2	0.2	0.2	0.3	0.1	0.1	0.0
Maternal complications	761	0.1	0.2	0.1	0.2	0.3	0.1	-66.7
Other perinatal conditions	760,762-764 766-767, 771-779	1.2	1.1	0.7	0.8	0.9	0.7	-22.2
Congenital anomalies	740-759	2.4	2.6	2.4	2.6	2.0	2.3	+15.0
Circulatory system	745-747	1.1	1.1	1.0	1.0	0.6	0.8	+33.3
Respiratory system	748	0.2	0.2	0.2	0.4	0.2	0.4	+100.0
Central nervous system	740-742	0.2	0.4	0.3	0.3	0.3	0.3	0.0
Other congenital anomalies	743-744, 749-759	0.9	0.9	0.9	0.8	0.8	0.8	0.0
Sudden infant death syndrome	798.0	1.4	1.6	1.5	1.5	1.9	1.5	-21.1
Accidents/adverse effects	800-949	0.3	0.2	0.2	0.4	0.3	0.4	+33.3
Pneumonia/influenza	480-487	0.3	0.2	0.3	0.2	0.2	0.2	0.0
All causes		9.3	9.6	9.5	9.6	9.4	9.4	0.0

1 Infant mortality rates are presented per 1,000 live births.
2 The five causes with the greatest number of deaths over the 1982-1987 period.

TABLE 3-6

NUMBER AND RATE[1] OF INFANT DEATHS BY CHILD'S ETHNIC GROUP AND GENDER, ARIZONA, 1985-1987

Ethnic Group	1985 Number	1985 Rate	1986 Number	1986 Rate	1987 Number	1987 Rate
All ethnic groups[2]						
Total	572	9.6	569	9.4	598	9.4
Male	350	11.5	338	10.9	347	10.7
Female	222	7.7	231	8.3	251	8.1
White[3]						
Total	344	9.9	330	8.9	330	9.0
Male	220	12.3	199	10.3	200	10.7
Female	124	7.3	136	7.5	130	7.4
Hispanic						
Total	120	8.0	129	7.5	141	8.0
Male	68	8.8	77	8.9	79	8.8
Female	52	7.1	52	6.1	62	7.2
Black						
Total	32	12.7	41	15.0	45	15.6
Male	20	16.0	29	20.4	23	15.6
Female	12	9.4	12	9.2	22	15.6
Native American						
Total	72	12.2	67	11.8	79	13.2
Male	38	13.0	37	13.2	45	15.0
Female	34	11.4	30	10.5	34	11.5

1 Rate per 1,000 live births in specified ethnic/gender group.
2 Includes records with other and unknown ethnic group.
3 Includes only whites of non-Hispanic origin.

Childhood Mortality

Death claimed the lives of 272 of the estimated 773,358 children 1 to 14 years old residing in Arizona in 1987 for an annual mortality rate of 35.2 per 100,000 children. This mortality rate was the lowest of the past six years (Table 3-7) and indeed of the decade.[e] Children's chances for survival improved 22.6 percent between 1982 and 1987. This improvement in survival meant that 80 children lived who would have died if the mortality rate of 1982 had still applied.

Forty-seven of every 100 children who died in 1987 did so from an unintentional injury. The 22 percent reduction in the unintentional injury death rate from 1986 to 1987 nearly equalled the one-year decreases in the mortality rates from malignant neoplasms and congenital anomalies. The mortality rates of these three top causes of death among children were the lowest of the past six years. Children also were murdered at the lowest rate in 1987. Only diseases of the heart did not fall to its lowest rate in 1987. Instead, the 1982 and 1987 rates of death from heart disease among children were equal and the 1985 rate was the lowest.

Children's improved survival from 1982 to 1987 was not due to a lower rate of death from unintentional injuries inflicted by motor vehicles. The 1987 rate was 18.9 percent greater than the 1982 rate, despite a drop from the 1986 six-year high. In contrast, the 1987 death rate from drowning not only was 31 percent lower than the 1986 rate but also was the lowest rate of the past six years. Similarly, unintentional injuries incurred in falls, fires or poisonings (the other accident category) were responsible for children's deaths in 1987 at a 45.8 percent lower rate than in 1982.

Data are presented here on causes of death of public interest which are not among the five leading causes in Table 3-7. Seven children committed suicide in 1987 compared to eight in 1986. However, boys comprised 100 percent of the 1986 childhood suicide deaths but 71.4 percent of the 1987 suicides. Human Immunodeficiency Virus (HIV) infections, which had a distinct ICD code for the first time in 1987, caused the death of five children in that year. All children who died from HIV infections were boys.

Since 1985, boys' mortality risk has been at least 53 percent greater than girls', although both genders had their best chances of survival in 1987 compared to the preceding five years. Vehicular-inflicted injury fatality rates of boys showed yearly increments between 1982 and 1986 and only fell in 1987. However, boys in 1987 died from these injuries at a rate that was 42.5 percent higher than in 1982. The same pattern was not seen for girls. Their death rate from vehicular injuries fluctuated from year to year, was lower in 1987 than 1982, but 1987 was not the lowest rate of the past six years.

Rates in 1987 were the lowest of the six-year period for <u>both</u> genders of children for deaths from homicide and unintentional injuries not related to motor vehicles or drowning. Thirteen boys and 8 girls were murdered in 1982 compared to 6 and 5 respectively in 1987. Boys' and girls' lives were claimed by injuries from such happenings as falls, fires or ingestion of poisonous substances at rates 25.4 and 67.6 percent lower respectively in 1987 than 1982. Girls in 1987 also had their lowest six-year death rate from congenital anomalies, 56.2 percent lower than in 1982. The other leading causes of death for either or both genders, namely malignant neoplasms, diseases of the heart, pneumonia/influenza and fatal drowning injuries, did show declines between 1986 and 1987 but were not at the lowest level of the six-year period.

[e] The childhood mortality rates in 1980 and 1981 were 45.7 and 45.5 respectively.

Both urban and rural children had their highest annual mortality rates of the six-year period in 1982 (Table 3-8). The improvement in survival noted in 1987 was almost twice as large for rural than for urban children (32.7 vs. 17.2 percent decline in mortality rate respectively). The larger survival gain of rural children reduced their mortality disadvantage with respect to urban children to 11 percent. Rural children in 1987 not only died at a lower rate but also in lower absolute numbers than in 1982.

However, the unintentional injury death rate of rural children in 1987 was virtually identical to the 1982 rate. The return of the 1987 injury fatality rate to the level of the 1982 rate was an improvement over the higher rates in the interim years but meant that 44 rural children died from an unintentional injury in 1987 compared to 39 in 1982. Injuries inflicted by motor vehicles accounted for 41.2 percent of the injury deaths to rural children in 1982 and 54.4 percent of those deaths in 1987. Moreover, the 1987 vehicular injury fatality rate of rural children in 1987 was 31.5 percent higher than 1982 and the second highest rate of the six-year period. If declining mortality rates from injuries due to drowning and other events had not partially offset the vehicular fatality rate, the 1987 unintentional injury death rate of rural children would have been higher.

In sharp contrast, the 1987 unintentional injury death rate of urban children was the lowest of the past six years, having dropped 22 percent from the 1982 rate. The 1987 vehicular fatality rate of urban children exceeded the 1982 rate by 13.2 not the 31.5 percent seen for rural children. Like their rural peers, urban children in 1987 experienced reduced mortality from drownings and injuries incurred in other accidents. For urban children, the fatality rates from these two causes were the lowest and second lowest of the six-year period respectively. Another form of violent death, homicide, claimed no rural children's lives in 1987 for the first time in the six years. Urban children were not as fortunate, with 11 murdered in 1987.

Rural girls had their highest mortality rate in 1982 and their lowest mortality rate in 1987 of that six-year period (Table 3-9). The mortality risk of rural female children was halved (50.7 percent decline) during that time for the largest improvement in survival chances among the four gender by region groups. Urban girls had the next largest six-year improvement in mortality at 31.3 percent. In the five years preceding 1987, the death rate of rural girls was at least 15 percent greater than urban girls. By 1987, the mortality rates of girls in the two regions were almost identical.

Rural boys did not close the mortality gap with respect to their urban peers as rural girls did. The risk of death was still 21.6 percent higher for rural compared to urban boys in 1987. Indeed, the 1987 mortality rate of rural boys, while their lowest rate of the six years, was as high as the highest six-year rate of urban boys. Male children in rural regions thus remained the group with the poorest survival chances among the four groups, with their mortality risk 77 percent higher than girls in either region.

TABLE 3-7

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG CHILDREN (1-14 years) BY GENDER, ARIZONA, 1982 - 1987

GENDER/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
MALE							
Accidents	20.6	26.0	22.3	27.5	27.3	21.8	- 20.1
Motor vehicle	8.0	11.0	11.6	12.9	14.0	11.4	- 18.6
Drowning	5.5	7.2	4.1	6.2	7.7	5.1	- 33.8
Other accidents	7.1	7.8	6.6	8.4	5.6	5.3	- 5.4
Malignant neoplasms	5.2	3.9	4.6	2.5	5.6	4.1	- 26.8
Congenital anomalies	2.5	4.2	5.5	3.1	3.1	2.5	- 19.4
Homicide	4.0	1.8	3.5	3.1	1.6	1.5	- 6.2
Diseases of heart	2.5	1.8	1.4	0.6	2.1	1.0	- 52.4
All causes	46.5	48.7	48.3	49.6	52.1	42.4	- 18.6
(Number of all deaths)	(151)	(163)	(167)	(177)	(197)	(167)	- 15.2
FEMALE							
Accidents	19.0	12.0	17.0	10.7	15.3	11.3	- 26.1
Motor vehicle	6.8	4.1	7.9	4.9	7.1	6.1	- 14.1
Drowning	4.8	4.1	5.8	2.9	3.8	2.9	- 23.7
Other accidents	7.4	3.8	3.3	2.9	4.4	2.4	- 45.4
Malignant neoplasms	5.5	4.1	1.8	4.4	4.1	3.2	- 22.0
Congenital anomalies	4.8	5.0	4.8	2.3	2.7	2.1	- 22.3
Homicide	2.6	1.2	2.7	1.7	1.9	1.3	- 31.6
Pneumonia and influenza	3.1	1.2	1.2	0.6	1.4	0.8	- 42.9
All causes	44.5	33.2	36.1	28.5	32.9	27.7	- 15.8
(Number of all deaths)	(138)	(106)	(119)	(98)	(120)	(105)	- 12.5
TOTAL							
Accidents	19.8	19.0	19.7	19.3	21.4	16.7	- 22.0
Motor vehicle	7.4	7.6	9.8	9.0	10.6	8.8	- 17.0
Drowning	5.2	5.6	4.9	4.6	5.8	4.0	- 31.0
Other accidents	7.2	5.8	5.0	5.7	5.0	3.9	- 22.0
Malignant neoplasms	5.4	4.0	3.3	3.4	4.8	3.6	- 25.0
Congenital anomalies	3.6	4.6	5.2	2.7	3.0	2.3	- 23.3
Homicide	3.3	1.5	3.1	2.4	1.7	1.4	- 17.6
Diseases of heart	1.6	1.4	1.0	0.4	1.7	1.6	- 5.9
All causes	45.5	41.1	42.4	39.2	42.7	35.2	- 17.5
(Number of all deaths)	(289)	(269)	(286)	(275)	(317)	(272)	- 14.2

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over the 1982-1987 period

TABLE 3-8

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG CHILDREN (1-14 years) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1982 - 1987

AREA/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Accidents	19.1	16.6	17.7	17.4	18.8	14.9	- 20.7
Motor vehicle	6.8	6.4	9.4	8.6	8.8	7.7	- 12.5
Drowning	5.5	6.2	5.7	4.1	5.9	4.0	- 32.2
Other accidents	6.8	4.0	2.6	4.7	4.0	3.2	- 20.0
Malignant neoplasms	5.1	4.2	3.5	3.1	5.7	3.2	- 43.9
Congenital anomalies	3.5	3.8	4.3	3.5	2.8	2.5	- 10.7
Homicide	3.3	1.7	2.8	2.8	1.5	1.9	+ 26.7
Infectious diseases	0.9	0.9	1.2	0.6	1.9	0.9	- 52.6
All causes	41.2	36.3	37.9	37.4	40.1	34.1	- 15.0
(Number of all deaths)	(187)	(171)	(186)	(190)	(218)	(194)	- 11.0
RURAL							
Accidents	21.6	25.7	24.9	23.9	28.5	21.5	- 24.6
Motor vehicle	8.9	10.9	10.8	9.9	15.5	11.7	- 24.5
Drowning	4.4	4.4	2.7	5.7	5.5	3.9	- 29.1
Other accidents	8.3	10.4	11.4	8.3	7.5	5.9	- 21.3
Congenital anomalies	3.9	6.6	7.6	0.5	3.5	2.0	- 42.9
Malignant neoplasms	6.1	3.0	2.7	4.2	2.5	4.9	+ 96.0
Homicide	3.3	1.1	3.8	1.6	2.5	0.0	-100.0
Diseases of heart	3.9	1.6	2.7	1.6	2.5	2.0	- 20.0
All causes	56.6	53.6	54.2	44.3	49.6	38.1	- 23.2
(Number of all deaths)	(102)	(98)	(100)	(85)	(99)	(78)	- 21.2
STATEWIDE							
Accidents	19.8	19.0	19.7	19.3	21.4	16.7	- 22.0
Motor vehicle	7.4	7.6	9.8	9.0	10.6	8.8	- 17.0
Drowning	5.2	5.6	4.9	4.6	5.8	4.0	- 31.0
Other accidents	7.2	5.8	5.0	5.7	5.0	3.9	- 22.0
Malignant neoplasms	5.4	4.0	3.3	3.4	4.8	3.6	- 25.0
Congenital anomalies	3.6	4.6	5.2	2.7	3.0	2.3	- 23.3
Homicide	3.3	1.5	3.1	2.4	1.7	1.4	- 17.6
Diseases of heart	1.6	1.4	1.0	0.4	1.7	1.6	- 5.9
All causes	45.5	41.1	42.4	39.2	42.7	35.2	- 17.5
(Number of all deaths)	(289)	(269)	(286)	(275)	(317)	(272)	- 14.2

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over the 1982-1987 period.

3 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-9

MORTALITY RATES[1] AMONG
CHILDREN (1-14 years) BY GENDER IN URBAN AND RURAL AREAS,[2]
ARIZONA, 1982 - 1987

AREA/GENDER	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Male	42.0	43.5	41.7	48.6	48.3	40.2	-16.8
Female	40.3	28.7	33.9	25.5	31.6	27.7	-12.3
Total	41.2	36.3	37.9	37.4	40.1	34.1	-15.0
RURAL							
Male	57.4	61.9	65.5	52.3	62.8	48.9	-22.1
Female	55.8	44.8	42.3	36.4	36.2	27.5	-24.0
Total	56.6	53.6	54.2	44.3	49.6	38.1	-23.2
STATEWIDE							
Male	46.5	48.7	48.3	49.6	52.1	42.4	-18.6
Female	44.5	33.2	36.1	28.5	32.9	27.7	-15.8
Total	45.5	41.1	42.4	39.2	42.7	35.2	-17.6

1 Rates are presented per 100,000 population.
2 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Adolescent Mortality

About one-quarter of a million (249,221) 15 to 19 year old adolescents or teenagers were estimated to reside in Arizona and 253 of them died in 1987. No improvement in adolescents' survival chances has been sustained during the past six years (Table 3-10). The steady decline in annual mortality rates for teenagers begun in 1980[f] ceased after 1983. The rates then increased annually until the 1986 rate was almost identical to the 1980 rate. The 11.8 percent drop in the rate from 1986 to 1987 ended the increasing trend but the 1987 rate was still greater than the 1982 and 1983 rates. A greater number of adolescents died in 1987 than in any year from 1982 to 1984.

The 1987 total mortality rate of teenagers fell from the 1986 level primarily because of minimum decreases of 28.8 percent in death rates from motor vehicle inflicted injuries, homicide and diseases of the heart. Simultaneously, one-year increases of like magnitude to the declines occurred in death rates from injuries incurred in other accidents and suicide. The suicide death rate of teenagers in 1987 was the highest of the six-year period and indeed the highest ever recorded in this state since death rates were published. One in five teenagers who died in 1987 did so by his/her own hand.

The 1987 all-time high suicide death rate applied to both male and female adolescents. In the five years before 1987, teenagers of either gender were at least 2.5 times more likely to succumb to a fatal vehicular injury than to self destruction. In contrast, in 1987 less than a twofold difference existed between the vehicular injury and suicide fatality rates of both genders. The genders also were identical in the declines between 1986 and 1987 in rates of death from unintentional injuries, homicide and cancer.

However, comparisons between 1982 and 1987 mortality rates for leading causes other than suicide and cancer differed for male and female adolescents. Homicide was the only cause of male teenaged death with a lower rate in 1987 than 1982. Given increases in four of five leading causes, male total mortality thus was 12 percent higher in 1987 than 1982. Female adolescents showed the opposite trend, with lower mortality rates from unintentional injuries, homicide and diseases of the heart during the same period. Hence, their total mortality rate declined 12 percent from 1982 to 1987.

Cancer killed male and female adolescents at equal rates and thus was the only leading cause of death without a gender differential in the last two years. The cause of death with the largest gender differential in 1987 was injuries from other accidents such as poisonings, falls, and drownings which accounted for 5.8 male deaths for every female death. The next largest excess of male over female deaths occurred for homicide (4:1), followed by vehicular injuries (2.8:1) and suicide (2.7:1). No female but three male adolescents died from diseases of the heart in 1987.

The lack of progress in improving adolescents' chances for survival from 1982 to 1987 was more marked for rural than urban adolescents (Table 3-11). The increase in mortality risk from 1982 to 1987 was eight times larger for rural than urban teenagers. If rural adolescents had experienced the same 1986 to 1987 decline in total mortality as urban adolescents, their 1987 total mortality rate would have been lower than in 1982. Rural teenagers in 1987 were 59 percent more likely to die than urban teenagers.

Rural compared to urban adolescents had over a 100 percent greater likelihood to be the the victim of a fatal unintentional injury in 1987. This large an elevation in risk of injury

[f] The adolescent mortality rates in 1980 and 1981 were 114.7 and 108.7 respectively.

fatalities for rural compared to urban adolescents was not seen in the prior five years. Moreover, 1987 was the only year of the six in which the injury fatality rate of rural adolescents was greater than the death rate of urban adolescents from all causes. If urban teenagers had died from injuries at the same rate as rural adolescents in 1987, 167 not 77 urban teenage deaths would have occurred from this single cause.

The 1987 doubled unintentional injury mortality risk of rural relative to urban teenagers applied to both vehicular and non-vehicular injuries. The risk of dying from vehicular injuries in 1987 was lower than in the preceding five years for urban but not rural adolescents. Rural adolescents' chances of avoiding fatal vehicular-inflicted injuries were better in 1982, 1983 and 1985 than in 1987. Both urban and rural adolescents had a higher probability of death from other injuries in 1987 than in most of the prior five years, with urban teenagers the highest of the time span.

Suicide fatalities were more probable among rural than urban adolescents in the two most recent years. Rural adolescents killed themselves at the highest rate and urban adolescents at the second highest rate of the six-year period in 1987. The 1987 record-high adolescent suicide death rate was not confined to one region. In 1987, self-inflicted intentional injuries compared to other-inflicted intentional injuries killed adolescents at a 2.2 times higher rate in urban and a 5 times higher rate in rural regions.

Both urban and rural adolescents were murdered at lower rates in 1987 than in 1986. Homicide was the only leading cause of death which was worse for urban than rural adolescents in both 1986 and 1987. In the four prior years, the disadvantage, if it existed, was in the opposite direction. Both rural and urban adolescents died at higher rates from malignant neoplasms and lower rates from diseases of the heart in 1987 than in 1982. One rural and two urban teenagers died from heart disease in 1987.

In 1982, rural male adolescents' risk of death exceeded urban male adolescents' risk by 51 percent, rural female adolescents' by 118 percent and urban female adolescents' by 196 percent (Table 3-12). By 1987, their mortality disadvantage with respect to each of their other peer groups had worsened considerably. Rural male adolescents chances of death now were 78 percent greater than urban males, 226 percent greater than rural females and 310 percent greater than urban females. Only rural male adolescents had their highest annual mortality rate of the six-year period in 1987, with 1987 25.5 percent higher than 1982. The trends for female adolescents in either region were starkly different, with 1987 recording the second lowest annual mortality rate of the six years. While the mortality rate for urban male adolescents was not lower in 1987 than 1982, it was lower than the three highest rates seen from 1984 to 1986.

TABLE 3-10

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ADOLESCENTS (15-19 years) BY GENDER, ARIZONA, 1982 - 1987

GENDER/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
MALE							
Accidents	77.0	72.7	101.6	78.6	91.4	82.9	- 9.3
Motor vehicle	53.8	56.6	84.3	66.8	72.6	59.5	- 18.0
Other accidents	23.2	16.1	17.1	11.8	18.8	23.4	+ 24.5
Suicide	20.7	21.1	17.9	26.2	26.1	30.6	+ 17.2
Homicide	14.1	12.7	15.4	9.3	19.6	12.9	- 34.2
Malignant neoplasms	4.1	5.9	6.0	10.2	5.7	5.6	- 1.8
Diseases of heart	1.6	1.7	2.6	2.5	4.1	2.4	- 41.5
All causes	130.7	130.1	161.4	146.4	158.4	146.4	- 7.6
(Number of all deaths)	(158)	(163)	(189)	(173)	(194)	(182)	- 6.2
FEMALE							
Accidents	29.6	30.1	29.4	44.0	44.6	25.6	- 42.6
Motor vehicle	25.4	26.7	25.1	37.2	41.4	21.6	- 47.8
Other accidents	4.2	3.4	4.3	6.8	3.2	4.0	+ 25.0
Suicide	9.3	7.7	6.1	8.5	4.0	11.2	+180.0
Homicide	6.8	3.4	7.8	6.8	8.1	3.2	- 60.5
Malignant neoplasms	2.5	1.7	1.7	4.2	5.7	5.6	- 1.8
Diseases of heart	2.5	0.9	0.9	3.4	0.0	0.0	0.0
All causes	64.3	54.2	52.8	74.5	72.2	56.8	- 21.3
(Number of all deaths)	(76)	(63)	(61)	(88)	(89)	(71)	- 21.2
TOTAL							
Accidents	53.5	51.6	65.8	61.3	67.5	54.2	- 19.7
Motor vehicle	39.7	41.8	55.0	52.0	56.9	40.5	- 28.8
Other accidents	13.8	9.8	10.8	9.3	10.6	13.7	+ 29.3
Suicide	15.1	14.5	12.0	17.3	15.0	20.9	+ 39.3
Homicide	10.5	8.1	11.6	8.0	13.8	8.0	- 38.5
Malignant neoplasms	3.4	3.8	3.9	7.2	5.7	5.6	- 1.8
Diseases of heart	2.1	1.3	1.7	3.0	2.0	1.2	- 40.0
All causes	97.9	92.5	107.5	110.4	115.1	101.5	- 11.8
(Number of all deaths)	(234)	(217)	(250)	(261)	(283)	(253)	- 10.6

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over the 1982-1987 period.

TABLE 3-11

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ADOLESCENTS (15-19 years) IN URBAN AND RURAL AREAS[3], ARIZONA, 1982 - 1987

AREA/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Accidents	45.5	43.6	56.0	56.8	57.1	41.7	- 27.0
Motor vehicle	37.0	36.1	48.4	47.6	47.2	31.4	- 33.4
Other accidents	8.5	7.5	7.6	9.2	9.9	10.3	+ 4.0
Suicide	16.0	12.8	12.2	21.8	13.2	20.0	+ 51.5
Homicide	9.7	7.5	11.7	6.3	16.5	9.2	- 44.2
Malignant neoplasms	3.4	4.1	4.1	4.0	6.0	5.4	- 10.0
Diseases of heart	1.7	1.2	1.8	2.9	2.2	1.1	- 50.0
All causes	87.1	77.9	97.9	103.3	103.8	88.2	- 15.0
(Number of all deaths)	(153)	(134)	(168)	(180)	(189)	(163)	- 13.8
RURAL							
Accidents	75.5	73.4	93.5	74.0	98.7	90.1	- 8.7
Motor vehicle	47.2	57.4	73.8	64.4	84.6	66.8	- 21.0
Other accidents	28.3	16.0	19.7	9.6	14.1	23.3	+ 65.2
Suicide	12.6	19.2	11.5	4.8	20.4	23.3	+ 14.2
Homicide	12.6	9.6	11.5	12.9	6.3	4.7	- 25.4
Malignant neoplasms	3.1	3.2	3.3	16.1	4.7	6.2	+ 31.9
Diseases of heart	3.2	1.6	1.6	3.2	1.6	1.6	0.0
All causes	127.5	132.5	134.4	130.4	147.3	139.8	- 5.1
(Number of all deaths)	(81)	(83)	(82)	(81)	(94)	(90)	- 4.3
STATEWIDE							
Accidents	53.5	51.6	65.8	61.3	67.5	54.2	- 19.7
Motor vehicle	39.7	41.8	55.0	52.0	56.9	40.5	- 28.8
Other accidents	13.8	9.8	10.8	9.3	10.6	13.7	+ 29.2
Suicide	15.1	14.5	12.0	17.3	15.0	20.9	+ 39.3
Homicide	10.5	8.1	11.6	8.0	13.8	8.0	- 42.0
Malignant neoplasms	3.4	3.8	3.9	7.2	5.7	5.6	- 1.8
Diseases of heart	2.1	1.3	1.7	3.0	2.0	1.2	- 40.0
All causes	97.9	92.5	107.5	110.4	115.1	101.5	- 11.8
(Number of all deaths)	(234)	(217)	(250)	(261)	(283)	(253)	- 10.6

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over the 1982-1987 period.

3 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-12

MORTALITY RATES[1] AMONG
ADOLESCENTS (15-19 years) BY GENDER IN URBAN AND RURAL AREAS,[2]
ARIZONA, 1982 - 1987

AREA/GENDER	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Male	115.0	117.5	141.2	135.7	139.0	122.9	- 11.6
Female	58.7	36.6	53.9	70.5	68.4	53.2	- 22.2
Total	87.1	77.9	97.9	103.3	103.8	88.2	- 15.0
RURAL							
Male	174.0	164.9	218.0	177.1	215.2	218.3	+ 1.4
Female	79.8	99.6	49.8	85.3	82.6	66.9	- 19.0
Total	127.5	132.5	134.4	130.4	147.3	139.8	- 5.1
STATEWIDE							
Male	130.7	130.1	161.4	146.4	158.4	146.4	- 7.6
Female	64.3	54.2	52.8	74.5	72.2	56.8	- 21.3
Total	97.9	92.5	107.5	110.4	115.2	101.5	- 11.9

1 Rates are presented per 100,000 population.
2 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Mortality of Young Adults

Persons 20 to 44 years of age, hereafter referred to as young adults, had 2,214 deaths among their resident population of 1,366,697 individuals in 1987 for a mortality rate of 162.0 per 100,000 (Table 3-13). The 1987 mortality rate, the second highest annual rate from 1982 to 1987, was 6.8 percent greater than the 1982 rate. If their mortality risk had not increased from 1982 to 1987, 141 fewer young adults would have died in the last year.

Clear trends toward higher or lower annual mortality over the six years were not evident for any of the five leading causes of death of young adults irrespective of gender. Males' 1987 mortality rates from suicide and malignant neoplasms and females' 1987 mortality rate from heart disease were the highest cause and gender-specific rates since 1982. Young adult men were 3.6 times more likely to commit suicide than young adult women in 1987. Young adult women in 1987 had a reduced mortality risk for cancer due to the decrease from 1986 to 1987. This reduction coupled with a 1986-87 cancer mortality increase for men narrowed the risk differential between the genders. In contrast, heart disease annually caused young adult males to die at more than double the rate of young adult females, despite a 60.0 percent increase in female mortality from 1986 to 1987.

Motor-vehicle related unintentional injuries prematurely ended the lives of young adults of both genders at higher rates in the more recent years from 1982 to 1987. The male mortality rate from motor vehicle accidents rose from below 50 to above 52 per 100,000 in 1984 and has since remained at that level. The 10.5 percent higher rate of male deaths from these unintentional injuries in 1987 than 1982 translated into 100 more deaths. Thirty-five more females died from injuries incurred in vehicular incidents in 1987 than 1982 as reflected in the 15.5 percent higher mortality rate. Young adult males on average had triple the annual risk for death from this cause than young adult females.

The gender differential in mortality from unintentional injuries incurred in events not related to motor vehicles was wider, with men having nearly a five times greater risk of death on average than women. If young adult women in 1987 had the same risk of death from unintentional injuries related to such events as drownings, falls, fires, etc. as young adult men, 197 rather than the 35 women would have died. Both men and women had lower mortality from these injuries in 1987 than 1982, but women's decline (24.6 percent) was four times larger than men's (6.1 percent).

The three leading causes of young adult male death are injuries either unintentionally or intentionally inflicted, i.e. accidents, suicide and homicide. Violence in these three forms claimed young adult men's lives in 1987 at a rate (140.6 per 100,000) 3.7 times greater than women's rate (38.1 per 100,000). Indeed, men were 52.5 percent more likely to violently die than women were to die of all causes (92.2 per 100,000). Six out of ten young adult male deaths compared to four out of ten female deaths were violent deaths.

Data are presented here for a cause of death with high public interest which did not qualify in 1987 as one of the five leading causes. Human Immunodeficiency Virus (HIV) infections was listed as the underlying cause of death on the death certificates of 78 young adult men in 1987. Ninety-six percent of the young adults who died from HIV infections were men. In comparison, alcoholism was responsible for 41 male deaths, drowning for 34, diabetes for 17, stroke for 16 and pneumonia/influenza for 13.

In 1987, young adults residing in rural regions of the state had their highest mortality rate since 1982, thereby eliminating any sustained improvement in survival noted in the intervening years. Six-year highs were noted in the death rates of rural young adults from motor-vehicle related unintentional injuries, suicide and malignant neoplasms. In

comparison, only one cause of death, unintentional injuries not related to motor vehicle accidents, had its highest urban young adult death rate of the six years in 1987. A majority (56.4 percent) of rural young adult deaths but a minority (43.7 percent) of urban young adult deaths in 1987 were due to unintentional injuries and suicide.

Motor-vehicle related unintentional injuries killed rural young adults in 1987 at the highest rate of this decade[g], a one-third increase over the 1982 rate. Twenty-one of 100 young adults in the state were rural residents but 42 of 100 vehicular fatalities occurred to rural young adults. Rural compared to urban young adults on average had an 82 percent greater probability of death from a motor vehicle accident in the five years preceding 1987. In 1987 the disadvantage of rural compared to urban young adults in premature death from vehicular collisions doubled to 168 percent. If urban young adults in 1987 had been equally susceptible as rural young adults to a motor vehicle inflicted fatality, 470 more young adults in Maricopa and Pima counties would have died.

The difference between rural and urban young adults in the risk of death from unintentional injuries not resulting from motor vehicle incidents grew smaller from 1982 to 1987, largely due to a 37.3 percent decline in the rural mortality rate. Rural mortality in 1987 from these unintentional injuries was at the lowest rate of the six years. However, rural young adults in 1987 were more than 50 percent more likely than urban adults to die from drowning, falling, fires, etc.

Rural young adults in 1987 were more likely to kill themselves and more likely to be killed by someone else than their urban counterparts. The 1987 mortality disadvantage of rural compared to urban young adults applied not only to injuries, both unintentional and intentional, but also to the leading causes of death which were natural disease processes. Cancer and heart disease in 1987 claimed rural relative to urban young adult lives at rates at least 23 percent greater.

No region by gender group had a more favorable mortality rate in 1987 than 1982 (Table 3-15). After a minimum 5.8 percent improvement in survival over 1982 from 1983 to 1986, the 1987 mortality rate of rural young adult men returned to its 1982 level. Rural young adult women's chances to die were higher in 1987 than 1982 as were the chances of urban men and women.

However, the probability of death among these four groups of young adults has differed and continues to differ considerably. In 1987 for every one urban young adult female who died, 1.5 rural females, 2.5 urban males and 3.8 rural males died. Urban young adult women had the best annual survival chances and rural young adult men had the worst. Urban young adult women in 1987 were 11.5 percent less likely to die from all causes (rate = 83.3 per 100,000) than rural young adults were to die from largely preventable unintentional injuries (rate = 94.1 per 100,000).

g The rural young adult motor vehicle fatality rates were 59.1 and 65.6 in 1980 and 1981 respectively.

TABLE 3-13

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG YOUNG ADULTS (20-44 years) BY GENDER, ARIZONA, 1982 - 1987

GENDER/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
MALE							
Accidents	79.0	69.5	83.3	80.5	80.6	82.6	+ 2.5
Motor vehicle	48.4	45.6	54.1	55.5	52.4	53.5	+ 2.1
Other accidents	31.0	23.9	29.2	25.0	28.2	29.1	+ 3.2
Suicide	35.1	33.6	35.9	34.5	36.7	37.3	+ 1.6
Homicide	23.2	22.5	20.6	18.4	24.5	20.7	-15.5
Diseases of heart	20.7	17.8	16.8	19.7	20.6	17.8	-13.6
Malignant neoplasms	18.4	17.8	16.1	17.8	15.6	19.1	+22.4
All causes	215.9	205.3	216.2	219.0	235.1	230.5	- 2.0
(Number of all deaths)	(1199)	(1184)	(1303)	(1377)	(1565)	(1590)	+ 1.6
FEMALE							
Accidents	21.7	19.4	20.5	21.1	24.8	22.3	-10.1
Motor vehicle	14.8	13.6	15.4	15.8	18.8	17.1	- 9.0
Other accidents	6.9	5.8	5.1	5.3	6.0	5.2	-13.3
Malignant neoplasms	16.1	24.3	21.0	17.5	24.5	21.7	-11.4
Suicide	10.2	12.0	7.4	8.8	12.2	10.5	-13.9
Diseases of heart	6.4	7.2	6.7	6.1	5.0	8.0	+60.0
Homicide	4.6	4.9	4.9	6.1	6.1	5.3	-13.1
All causes	86.7	94.9	88.9	85.5	102.6	92.2	-10.1
(Number of all deaths)	(475)	(539)	(526)	(531)	(671)	(624)	- 7.0
TOTAL							
Accidents	50.7	44.6	52.2	51.0	53.0	52.8	- 0.4
Motor vehicle	31.7	29.7	34.9	35.8	35.8	35.5	- 0.8
Other accidents	19.0	14.9	17.2	15.2	17.2	17.3	+ 0.6
Suicide	22.8	22.9	21.8	21.8	24.6	24.0	- 2.4
Malignant neoplasms	17.2	21.0	18.5	17.7	20.0	20.4	+ 2.0
Homicide	14.0	13.8	12.8	12.3	15.4	13.1	-14.9
Diseases of heart	13.6	12.6	11.8	13.0	12.9	13.0	+ 0.8
All causes	151.7	150.5	153.2	152.7	169.4	162.0	- 4.4
(Number of all deaths)	(1674)	(1723)	(1829)	(1908)	(2236)	(2214)	- 1.0

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

TABLE 3-14

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG YOUNG ADULTS (20-44 years) IN URBAN AND RURAL AREAS,[3] ARIZONA, 1982 - 1987

AREA/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Accidents	39.0	37.3	46.0	41.0	45.3	41.5	- 8.4
Motor vehicle	25.7	25.1	31.2	30.2	30.5	26.1	-14.4
Other accidents	13.3	12.2	14.8	10.8	14.8	15.4	+ 4.1
Suicide	22.2	22.5	22.6	20.9	24.0	22.5	- 6.2
Malignant neoplasms	17.9	20.9	17.8	17.6	19.6	19.5	- 0.5
Homicide	13.7	14.2	11.3	12.3	15.3	12.7	-17.0
Diseases of heart	12.2	10.7	10.8	11.9	12.0	11.9	- 0.8
All causes	133.5	136.6	142.2	138.6	158.1	146.3	- 7.5
(Number of all deaths)	(1141)	(1216)	(1330)	(1351)	(1636)	(1570)	- 4.0
RURAL							
Accidents	90.9	70.3	74.6	86.5	80.7	94.1	+16.6
Motor vehicle	52.3	45.9	48.3	55.6	54.7	69.9	+27.8
Other accidents	38.6	24.4	26.3	30.9	26.0	24.2	- 6.9
Suicide	24.5	24.4	18.9	24.7	26.7	29.7	+11.2
Malignant neoplasms	14.9	21.6	21.2	17.8	21.4	23.9	+11.7
Diseases of heart	18.5	19.2	15.4	16.7	16.1	16.7	+ 3.7
Homicide	14.9	12.6	18.2	12.4	15.8	14.7	- 7.0
All causes	214.4	199.0	192.8	202.4	210.4	219.5	+ 4.3
(Number of all deaths)	(533)	(507)	(499)	(557)	(600)	(644)	+ 7.3
STATEWIDE							
Accidents	50.7	44.6	52.2	51.0	53.0	52.8	- 0.4
Motor vehicle	31.7	29.7	34.9	35.8	35.8	35.5	- 0.8
Other accidents	19.0	14.9	17.2	15.2	17.2	17.3	+ 0.6
Suicide	22.8	22.9	21.8	21.8	24.6	24.0	- 2.4
Malignant neoplasms	17.2	21.0	18.5	17.7	20.0	20.4	+ 2.0
Homicide	14.0	13.8	12.8	12.3	15.4	13.1	-14.9
Diseases of heart	13.6	12.6	11.8	13.0	12.9	13.0	+ 0.8
All causes	151.7	150.5	153.2	152.7	169.4	162.0	- 4.4
(Number of all deaths)	(1674)	(1733)	(1829)	(1908)	(2236)	(2214)	- 1.0

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

3 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-15

MORTALITY RATES[1] AMONG YOUNG ADULTS (20-44 years) BY GENDER IN URBAN AND RURAL AREAS[2], ARIZONA, 1982 - 1987

AREA/GENDER	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Male	186.5	178.5	199.2	197.8	217.9	207.4	- 4.8
Female	79.8	94.1	84.2	78.2	96.7	83.3	-13.9
Total	133.5	136.6	142.2	138.6	158.1	146.3	- 7.5
RURAL							
Male	316.4	298.8	278.4	295.6	299.0	317.2	+ 6.1
Female	110.5	97.4	105.9	110.9	123.6	124.0	+ 0.3
Total	214.4	199.0	192.8	202.4	210.4	219.5	+ 4.3
STATEWIDE							
Male	215.9	205.3	216.2	219.0	235.1	230.5	- 2.0
Female	86.7	94.9	88.9	85.5	102.6	92.2	-10.1
Total	151.7	150.5	153.2	152.7	169.4	162.0	- 4.4

1 Rates are presented per 100,000 population.

2 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Mortality of Middle-Aged Adults

Death occurred in 1987 to 4,953 of the 593,936 Arizona residents 45 to 64 years old, hereafter called middle-aged adults, for a mortality rate of 833.9 per 100,000 (Table 3-16). Survival of these adults improved 4.5 percent from 1982 to 1987, although the lowest mortality rate of the six years occurred in 1986. Due to the 4.5 percent improvement, 233 middle-aged adults did not die in 1987 who would have died if the 1982 rate still applied. However, 145 lives would have been saved if the mortality rate had not increased from 1986 to 1987.

Malignant neoplasms or cancer was the leading cause of death of middle-aged adults, although its ranking relative to heart disease mortality differed for men and women. Cancer death rates were greater in the five years after 1982, a temporal trend primarily influenced by women for whom cancer is the leading cause of death. The male 1987 mortality rate from cancer nearly equalled the 1982 rate, while the female cancer death rate was 6.6 percent higher in 1987 than 1982. The differing cancer mortality trends by gender reduced the elevation of the male rate over the female rate.

In contrast, heart disease, the leading cause of death of middle-aged men, showed as large a gender differential in 1987 as in 1982, with men 200 percent more likely to die from this cause than women. Heart disease mortality declined almost equally for men and women from 1982 to 1987. The annual decreases in death rates from heart disease seen for five years were interrupted by a 1986-87 increase for both genders. Evaluation of whether this increase signifies a true departure from a long-term declining trend in heart disease mortality awaits data from future years.

Chronic obstructive pulmonary disease (COPD), the third leading cause of death of both genders, claimed middle-aged male lives at almost the lowest rate but female lives at the second highest rate of the six-year period. The 1987 female mortality rate from COPD was 26.4 percent higher while the 1987 male mortality rate was 9.3 percent lower than their respective rates in 1982. The different temporal trends for the two genders cut men's greater risk than women of dying from COPD in half.

The two genders also differed in their temporal trends of mortality from unintentional injuries. In 1987 compared to 1982, the male mortality rate from all unintentional injuries was 17.6 percent lower while the female mortality rate 21.8 percent higher. Male survival from unintentional injuries improved during 1982 to 1987 predominately because of the reduction in death rates from injuries not involving motor vehicles. In contrast, both components of unintentional injuries, motor vehicle and other, claimed female lives at 20 percent greater rates in 1987 than 1982. Worsening female mortality from unintentional injuries reduced the gender ratio from 2.8 male to 1 female death in 1982 to 1.8:1 in 1987.

Middle-aged men and women differ in one of the five leading causes of death, with alcoholism included for men and cerebrovascular disease for women. Male mortality rates from alcoholism declined 19.6 percent from 1982 to 1987, the year in which the lowest six-year annual rate occurred. Female mortality from stroke declined a smaller amount, dropping less than 5 percent from 1982 to 1987.

Rural middle-aged adults' survival disadvantage relative to urban adults more than doubled from 1982 (9.2 percent) to 1987 (21.9 percent) (Table 3-17). The 1987 rural mortality rate was the second highest while the 1987 urban mortality rate was the second lowest rate of the six-year period. If urban middle-aged adults in 1987 had died at the same rate as their rural counterparts, an additional 792 lives would have ended.

Cancer claimed rural lives at a higher rate than urban lives in five of the six years examined. Rural adults' annual mortality rate from cancer has exceeded their annual death rate from heart disease since 1985. The 1987 rural death rate from heart disease exceeded the 1982 urban death rate. In 1987, rural adults were more likely to die from either of these two leading causes of death than were urban adults.

The mortality risk from COPD in 1987 was the lowest of the six-year period for urban adults but the highest for rural adults. In 1982 and 1983, rural adults were less likely to die from COPD than urban adults. By 1987, the COPD death rate of rural adults was 48.6 percent higher than the 1982 rate and exceeded the death rate of urban adults by 52.8 percent.

Rural adults were 10 percent less likely to die from unintentional injuries in 1987 than in 1982, the only leading cause of death for rural adults which declined this much. Urban adults showed no reduction in risk from this cause of death, with their 1982 and 1987 rates virtually identical. Despite these different temporal trends, urban adults in 1987 still had lower mortality from unintentional injuries relative to rural adults.

Motor vehicles were the source of fatal unintentional injuries among urban adults at the highest rate of the six-year period in 1987. The 14.7 percent increase from 1982 to 1987 in the motor vehicle-related unintentional injury death rate for urban adults was accompanied by an 11.4 percent decline for rural adults. The opposing trends halved the mortality disadvantage of rural compared to urban adults. In contrast, the mortality disadvantage of rural relative to urban adults due to unintentional injuries from other than motor vehicle accidents remained unchanged from 1982 to 1987.

Alcoholism killed urban adults at a 32.6 percent lower rate but rural adults at a 6.6 percent higher rate in 1987 than 1982. However, the 1987 alcoholism death rate of rural adults was lower than the annual rates of 35 or more seen in three of the prior five years. As with the other four leading causes of death, rural adults were more likely to die from alcoholism than their urban counterparts.

The poor mortality profile of rural compared to urban adults was not confined to one gender (Table 3-18). While both urban men and women died at lower rates in 1987 than 1982, rural men and women died at higher rates. Urban females consistently had the lowest annual death rates over the time period. Their mortality advantage in 1987 was 15 percent compared to rural females, 40 percent compared to urban males and 52 percent compared to rural males. If the 1987 mortality rate of the least advantaged group, rural males, had applied statewide, 7,442 instead of 4,953 middle-aged adults would have died.

TABLE 3-16

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 years) BY GENDER, ARIZONA, 1982 - 1987

GENDER/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
MALE							
Diseases of heart	434.1	406.7	401.2	375.5	342.6	358.4	+ 4.6
Malignant neoplasms	308.0	295.7	296.2	302.8	312.0	308.9	- 1.0
Chronic obstructive pulmonary disease	52.7	50.6	52.9	46.7	50.2	47.8	- 4.8
Accidents	63.4	60.0	55.2	53.0	53.4	52.3	- 2.1
Motor vehicle	31.9	26.3	31.8	31.5	31.0	30.5	- 1.6
Other accidents	31.5	33.7	23.4	21.5	22.4	21.8	- 2.7
Alcoholism	43.9	41.2	44.4	43.8	39.5	35.3	- 10.6
All causes	1160.2	1094.6	1117.0	1081.9	1040.3	1058.2	+ 1.7
(Number of all deaths)	(2908)	(2791)	(2915)	(2916)	(2921)	(3056)	+ 4.6
FEMALE							
Malignant neoplasms	244.0	256.7	260.5	272.6	250.7	260.2	+ 3.8
Diseases of heart	141.7	136.6	140.1	122.8	111.8	119.6	+ 7.0
Chronic obstructive pulmonary disease	25.4	29.8	26.1	35.7	29.1	32.1	+ 10.3
Cerebrovascular diseases	23.9	28.3	28.9	25.4	29.1	22.9	- 21.3
Accidents	22.9	23.7	20.5	21.9	16.4	27.9	+ 70.1
Motor vehicle	12.7	12.9	14.5	11.3	10.4	15.7	+ 51.0
Other accidents	10.2	10.8	6.0	10.6	6.0	12.2	+103.3
All causes	612.2	625.6	643.8	638.5	592.7	621.7	+ 4.9
(Number of all deaths)	(1689)	(1745)	(1824)	(1862)	(1771)	(1897)	+ 7.1
TOTAL							
Malignant neoplasms	274.4	275.3	277.6	287.1	280.4	283.9	+ 1.2
Diseases of heart	280.9	265.6	265.3	244.1	223.6	235.7	+ 5.4
Chronic obstructive pulmonary disease	38.4	39.7	39.0	41.0	39.3	39.7	+ 1.0
Accidents	42.1	41.0	37.1	36.7	34.4	39.7	+ 15.4
Motor vehicle	21.8	19.3	22.8	20.8	20.4	22.9	+ 12.3
Other accidents	20.3	21.7	14.3	15.9	14.0	16.8	+ 20.0
Alcoholism	30.6	29.4	31.8	30.5	25.4	25.1	- 1.2
All causes	873.1	849.6	870.7	851.5	809.5	833.9	+ 3.0
(Number of all deaths)	(4597)	(4536)	(4739)	(4778)	(4692)	(4953)	+ 5.6

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

TABLE 3-17

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG MIDDLE-AGED ADULTS (45-64 years) BY URBAN AND RURAL AREAS,[3] ARIZONA, 1982 - 1987

AREA/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Malignant neoplasms	272.9	281.5	273.7	290.5	275.5	282.4	+ 2.5
Diseases of heart	273.9	248.8	251.9	240.9	216.8	223.6	+ 3.1
Chronic obstructive pulmonary disease	39.0	42.4	38.8	43.4	37.9	35.4	- 6.6
Accidents	36.2	20.3	33.1	29.8	28.2	36.0	+27.7
Motor vehicle	18.4	15.3	21.0	17.4	17.1	21.1	+23.4
Other accidents	17.8	5.0	12.1	12.4	11.1	14.9	+34.2
Alcoholism	31.7	27.7	30.9	29.8	22.3	23.9	+ 7.2
All causes	853.8	815.9	836.9	835.0	776.9	793.4	+ 2.1
(Number of all deaths)	(3393)	(3296)	(3468)	(3556)	(3443)	(3613)	+ 4.9
RURAL							
Diseases of heart	302.4	317.9	307.9	254.3	245.5	275.6	+12.3
Malignant neoplasms	279.2	256.8	290.2	276.5	296.1	288.6	- 2.5
Accidents	60.5	66.1	50.1	58.4	54.2	52.0	- 4.1
Motor vehicle	32.6	31.5	28.5	31.8	30.8	28.9	- 6.2
Other accidents	27.9	34.6	21.6	26.6	23.5	23.1	- 1.7
Chronic obstructive pulmonary disease	36.4	31.6	39.3	33.3	44.0	54.1	+23.0
Alcoholism	27.1	38.2	38.5	25.9	35.2	28.9	-17.9
All causes	933.7	954.5	978.4	903.3	915.5	966.9	+ 5.6
(Number of all deaths)	(1204)	(1240)	(1271)	(1222)	(1249)	(1340)	+ 7.3
STATEWIDE							
Malignant neoplasms	274.4	275.3	277.6	287.1	280.4	283.9	+ 1.2
Diseases of heart	280.9	265.6	265.3	244.1	223.6	235.7	+ 5.4
Chronic obstructive pulmonary disease	38.4	39.7	39.0	41.0	39.3	39.7	+ 1.0
Accidents	42.1	41.0	37.1	36.7	34.4	39.7	+15.4
Motor vehicle	21.8	19.3	22.8	20.8	20.4	22.9	+12.3
Other accidents	20.3	21.7	14.3	15.9	14.0	16.8	+20.0
Alcoholism	27.0	29.2	31.8	28.9	25.4	25.1	- 1.2
All causes	873.1	849.6	870.7	851.5	809.5	833.9	+ 3.0
(Number of all deaths)	(4597)	(4536)	(4739)	(4778)	(4692)	(4953)	+ 5.6

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

3 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-18

MORTALITY RATES[1] AMONG MIDDLE-AGED ADULTS (45-64 years) BY GENDER IN URBAN AND RURAL AREAS[2] ARIZONA, 1982 - 1987

AREA/GENDER	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Male	1131.9	1036.9	1070.6	1062.3	997.1	999.5	+ 0.2
Female	602.5	615.1	622.5	625.1	582.5	597.6	+ 2.6
Total	853.8	815.9	836.9	835.0	776.9	793.4	+ 2.1
RURAL							
Male	1246.0	1271.7	1264.0	1143.5	1227.0	1253.0	+ 2.1
Female	642.7	658.9	712.3	680.8	625.7	700.1	+18.9
Total	933.7	954.5	978.4	903.3	915.5	966.9	+ 5.6
STATEWIDE							
Male	1160.2	1094.6	1117.0	1081.9	1040.3	1058.2	+ 1.7
Female	612.2	625.6	643.8	638.5	592.7	621.7	+ 4.9
Total	873.1	849.6	870.7	851.5	809.5	833.9	+ 5.6

1 Rates are presented per 100,000 population.

2 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

Elderly Mortality

The 1987 resident population of 421,074 elderly, i.e. people 65 years of age or older, in Arizona experienced 18,350 deaths for a mortality rate of 4357.9 per 100,000 or 4.4 percent (Table 3-19). The 1987 mortality rate differed by less than one percent from the 1982 rate. The lack of improvement in survival chances from 1982 to 1987 meant that an additional 3,697 elderly residents died in the last year.

Sixty percent of the elderly deaths in 1987 were due to either heart disease or cancer. The heart disease mortality rate declined 6.8 percent while the cancer mortality rate increased 5.8 percent from 1982 to 1987. Thus, from 1982 to 1987, the proportional contribution of heart disease to elderly deaths grew smaller, while cancer accounted for a larger share of deaths among the state's oldest residents. Moreover, the 1987 cancer mortality rate was the highest of this decade, almost 10 percent greater than the 1980 rate of 892.1. The steady temporal increase in cancer mortality observed to date is very likely to continue in the future.

Like heart disease with which it shares many risk factors, stroke or cerebrovascular disease mortality continued to decline and its 1987 death rate was 14 percent lower than the 1982 rate. The other two leading causes of elderly death, chronic obstructive pulmonary disease (COPD) and pneumonia/influenza, did not claim lives at lower rates as the decade progressed. The 1987 COPD mortality rate was 11.9 percent greater and the 1987 pneumonia/influenza death rate was 21.9 percent greater than the respective 1982 rates. However, both causes of death had their highest mortality rate of the decade in 1986 not in 1987.

The increase in cancer mortality rate from 1982 to 1987 was larger for men than women, while the 1982 to 1987 decline in heart disease mortality was greater for women than men. Therefore, males' likelihood of death from either of these causes relative to females expanded over the six years to 47.8 percent greater for heart disease and to 74.2 percent greater for cancer. The 1987 cancer mortality rate of males but not of females was the highest and the 1987 heart disease mortality rate of females but not of males was the lowest of the six-year period. The proportional contributions of heart disease to deaths of elderly males and females were virtually identical (37.6 and 36.9 percent respectively), but cancer accounted for a greater share of male (24.4 percent) than female (20.3 percent) deaths.

Stroke is the only leading cause of death from which elderly men were less likely to die than women in five of the six years including 1987. A decline from 1982 to 1987 in stroke mortality rates occurred for both genders. However, only the 1987 male stroke mortality rate was the lowest of the decade, 20 percent less than the 1980 rate of 374.2.

In contrast to stroke, temporal trends in mortality from COPD substantially differed by gender. Females' survival chances from COPD clearly worsened, with their 1987 rate 47.9 percent higher than their 1982 rate. On the other hand, males' survival chances from this cause of death neither worsened nor improved since their annual death rates erratically varied within a narrow range of no more than 10 percentage points. Females' worsening mortality from COPD coupled with males' relative stability diminished the male mortality disadvantage from this cause of death from 194 percent greater in 1982 to 94 percent greater in 1987.

The gender differential also grew smaller in elderly male relative to female mortality from pneumonia/influenza since the increase from 1982 to 1987 was twice as great for women (31.9 percent) than men (14.5 percent). Males in 1987 were 36.9 percent more

likely than females to die from pneumonia/influenza compared to 57.8 percent more likely in 1982. The elderly male death rate from pneumonia/inlfuenza has annually exceeded 210 deaths per 100,000 since 1984, while the annual female death rates have not surpassed 165 in this decade.[h]

The 1987 mortality rate of the rural elderly was lower than the 1987 rate of the urban elderly as it was in the prior five years (Table 3-20). Improved or deteriorated annual survival chances were not sustained for two years for either the rural or urban elderly. From 1982 to 1987, rural elderly mortality rates varied from a low of 4034 (1984) to a high of 4291 (1982). The size of the range in which annual urban elderly mortality rates varied was very similar, with a low of 4291 (1985) and a high of 4461 (1984).

The mortality advantage of the rural compared to urban elderly largely stemmed from their consistently lower annual death rates from heart disease, stroke, COPD and pneumonia/influenza (except for 1982 for the latter two causes). The decline in heart disease mortality from 1982 to 1987 was more than twice as large for rural (12.8 percent) than urban (5.0 percent) elderly. Rural and urban elderly declined in their stroke mortality rates by almost identical amounts. The mortality risk of the urban elderly grew by 17.3 percent for COPD and by 27.2 percent for pneumonia/influenza from 1982 to 1987. Simultaneously, the mortality chances of the rural elderly declined 3.4 percent for COPD and increased by 6.3 percent for pneumonia/influenza. In 1987, among the leading causes, the differential in mortality risk between the urban and rural elderly was greatest for heart disease.

In striking contrast, the rural elderly experienced a 4.5 times greater increase in cancer mortality rates than the urban elderly from 1982 to 1987. The standing of rural relative to urban elderly in cancer mortality reversed from lower to higher in 1986. The cancer mortality risk of the rural elderly was 3.7 percent greater than the urban elderly in 1987. Indeed, the 1987 cancer mortality rate of the rural elderly was the highest rate seen for either group of regional residents in this decade.[i]

Since 1983 the ranking from best to worst survival chances of regional by gender groups has been rural elderly females, urban elderly females, rural elderly males and urban elderly males (Table 3-21). None of the region by gender groups had the lowest or highest mortality rate of the six-year period in 1987. The 1987 mortality rate of each group did not markedly differ from the 1982 rate.

h The elderly female mortality rates from pneumonia/influenza for 1980 and 1981 were 117.5 and 113.0 respectively.

i The 1980 and 1981 cancer mortality rates for urban elderly were 904.5 and 920.2 respectively and for rural elderly were 850.4 and 883.4 respectively.

TABLE 3-19

MORTALITY RATES[1] FOR THE FIVE LEADING CAUSES[2] OF DEATH AMONG ELDERLY (65 years and older) BY GENDER, ARIZONA, 1982 - 1987

GENDER/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
MALE							
Diseases of heart	2097.1	2059.3	2017.3	1937.6	1946.0	1992.4	+ 2.4
Malignant neoplasms	1205.0	1224.7	1256.2	1237.0	1236.6	1292.1	+ 4.5
Chronic obstructive pulmonary disease	393.8	379.4	403.6	392.4	418.7	383.4	- 8.4
Cerebrovascular disease	343.2	358.0	368.7	346.7	302.2	299.8	- 0.8
Pneumonia and influenza	185.4	169.9	218.0	212.2	212.8	212.2	- 0.3
All causes	5262.9	5293.0	5369.9	5222.4	5197.1	5297.5	+ 1.9
(Number of all deaths)	(7805)	(8166)	(8622)	(8811)	(9011)	(9561)	+ 6.1
FEMALE							
Diseases of heart	1506.3	1439.0	1389.6	1413.5	1384.0	1348.1	- 2.6
Malignant neoplasms	706.5	694.4	713.2	725.2	751.3	741.9	- 1.3
Cerebrovascular disease	377.8	365.0	357.1	321.6	306.8	320.9	+ 4.6
Chronic obstructive pulmonary disease	133.8	153.6	180.2	178.8	200.0	197.9	- 1.0
Pneumonia and influenza	117.5	113.0	143.4	146.8	165.2	155.0	- 6.2
All causes	3608.0	3535.7	3584.7	3564.0	3596.8	3653.1	+ 1.6
(Number of all deaths)	(6848)	(7042)	(7499)	(7912)	(8254)	(8789)	+ 6.5
TOTAL							
Diseases of heart	1765.4	1709.2	1662.2	1639.8	1625.9	1644.8	+ 1.2
Malignant neoplasms	925.2	925.5	949.0	946.2	960.1	977.7	+ 1.8
Cerebrovascular diseases	362.6	361.2	362.1	332.5	304.8	311.8	+ 2.3
Chronic obstructive pulmonary disease	247.8	252.1	277.2	271.0	294.1	277.4	- 5.7
Pneumonia and influenza	147.3	137.8	175.8	175.1	185.7	179.5	- 3.3
All causes	4333.9	4302.8	4359.9	4280.1	4285.6	4357.9	+ 1.7
(Number of all deaths)	(14653)	(15208)	(16121)	(16723)	(17265)	(18350)	+ 6.3

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

TABLE 3-20

MORTALITY RATES[1] FOR THE
FIVE LEADING CAUSES[2] OF DEATH AMONG ELDERLY
(65 years and older) IN URBAN AND RURAL AREAS,[3]
ARIZONA, 1982 - 1987

AREA/CAUSE	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Diseases of heart	1784.4	1721.7	1706.7	1652.9	1667.1	1695.8	+ 1.7
Malignant neoplasms	939.6	947.6	975.2	945.4	958.8	969.2	+ 1.1
Cerebrovascular disease	369.4	382.6	369.8	333.4	310.7	318.6	+ 2.5
Chronic obstructive pulmonary disease	239.8	256.6	294.4	273.8	295.0	281.3	- 4.6
Pneumonia and influenza	144.2	139.0	188.5	184.5	191.1	183.4	- 4.0
All causes	4346.8	4347.4	4461.0	4290.7	4330.3	4390.4	+ 1.4
(Number of all deatns)	(11274)	(11759)	(12593)	(12816)	(13255)	(14030)	+ 5.8
RURAL							
Diseases of heart	1703.1	1670.6	1518.4	1580.3	1495.3	1484.5	- 0.7
Malignant neoplasms	877.6	848.6	864.4	938.5	964.2	1004.8	+ 4.2
Cerebrovascular disease	340.4	298.6	337.3	325.7	286.3	290.6	+ 1.5
Chronic obstructive pulmonary disease	274.3	237.5	221.8	259.1	291.4	265.0	- 9.1
Pneumonia and influenza	157.5	132.6	134.9	143.0	168.4	167.5	- 0.5
All causes	4291.4	4157.3	4033.3	4200.3	4144.0	4225.5	+ 2.0
(Number of all deaths)	(3379)	(3449)	(3528)	(3907)	(4010)	(4320	+ 7.7
STATEWIDE							
Diseases of heart	1765.4	1709.2	1662.2	1639.8	1625.9	1644.8	+ 1.2
Malignant neoplasms	925.2	925.5	949.0	946.2	960.1	977.7	+ 1.8
Cerebrovascular disease	362.6	361.2	362.1	332.5	304.8	311.8	+ 2.3
Chronic obstructive pulmonary disease	247.8	252.1	277.2	271.0	294.1	277.4	- 5.7
Pneumonia and influenza	147.3	137.8	175.8	175.1	185.7	179.5	- 3.3
All Causes	4333.9	4302.8	4359.9	4280.1	4285.6	4351.9	+ 1.7
(Number of all deaths)	(14653)	(15208)	(16121)	(16723)	(17265)	(18350)	+ 6.3

1 Rates are presented per 100,000 population.

2 The five causes with the greatest number of deaths over 1982-1987 period.

3 Maricopa and Pima Counties comprise Arizona's urban areas while the remaining counties represent rural areas.

TABLE 3-21

MORTALITY RATES[1] AMONG ELDERLY (65 years and older) BY GENDER IN URBAN AND RURAL AREAS[2] ARIZONA, 1982-1987

AREA/GENDER	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
URBAN							
Male	5324.0	5382.6	5528.6	5285.3	5261.7	5397.6	+ 2.6
Female	3605.7	3582.8	3678.2	3592.5	3655.5	3664.1	+ 0.2
Total	4346.8	4347.4	4461.0	4290.7	4330.3	4390.4	+ 1.4
RURAL							
Male	5083.6	5029.0	4909.2	5040.9	5011.6	5009.9	0.0
Female	3616.4	3370.0	3256.0	3464.8	3396.7	3615.6	+ 6.4
Total	4291.4	4157.3	4033.8	4200.3	4144.0	4255.5	+ 2.0
STATEWIDE							
Male	5262.9	5293.0	5369.9	5222.4	5197.1	5297.5	+ 1.9
Female	3608.0	3535.7	3584.7	3564.0	3596.8	3653.1	+ 1.6
Total	4333.9	4302.8	4359.9	4280.1	4285.6	4357.9	+ 1.7

1 Rates are presented per 100,000 population.

2 Maricopa and Pima counties comprise Arizona's urban areas while the remaining counties represent its rural areas.

SPECIAL SECTION[j]

CAUSES OF INFANT DEATH BY REGION, 1973 - 1987

The 1988 report[12] by the National Commission to Prevent Infant Mortality described the problem of infant death in the United States in powerful terms. As the report indicated, twenty years ago America ranked 15th among the nations of the world in saving the lives of babies before their first birthday. Two decades afterward, the infant mortality rate of the United States ranked 19th among the industrialized nations of the world. Annual infant mortality rates in Arizona have not improved since 1982 (see Table 3-1) when the rate was 17 percent better than the U.S. rate.

The purpose of this section is to improve our understanding of infant mortality in Arizona by examining temporal trends in infants' survival chances by a) county or region of the state; b) whether the death was neonatal (within the first 27 days) or postneonatal (28 days to first birthday); and c) specific causes of death. Attention was focused on temporal trends and their differentiation by the other variables in order to uncover possible factors which may be involved in reducing infant mortality in the future. The trends were determined over three five-year periods: 1973-77; 1978-82; and 1983-87.

Time and place as the organizing variables in the analyses allowed comparisons of distinct populations with possible differences in factors influencing the incidence of infant death. However, the reader is advised that analyzing two variables by a third, either period or cause of death, produces a somewhat complex picture. Specifically, two temporal trends will be evident, one within a place and the other among the places. The degree of complexity will increase with decreasing similarity in these temporal trends. Of course, the dissimilarity and related complexity cannot be predicted before the analyses are done.

Temporal Trends by County

Differences in temporal trends were examined first by county. A county was included only if at least one percent of both live births and infant deaths statewide occurred to residents of that county in each of the three time periods. This criterion was adopted in order to have reasonably reliable rates over time. Gila, Graham, Greenlee and Santa Cruz counties were thus excluded, while LaPaz county, which separated from Yuma county in 1983, was combined with Yuma county since 1983 for consistency over time. The ten counties compared varied in 1973-77 from a low infant mortality rate (IMR) of 11.2 to a high of 22.0, almost a twofold difference (Table 4-1). The IMRs of all counties declined from 1973-77 to 1983-87. This declining trend reduced the difference between the highest and lowest IMRs to 75.6 percent in 1978-82 and to 32.2 percent in 1983-87. The counties' IMRs were declining and converging. This suggested that factors associated with geographic residency differentiated risk for infant death less strongly over time.

Temporal patterns of declining infant mortality differed among the counties. The IMRs of Apache, Navajo and Pinal counties were at least 15 percent above the state rate in 1973-77 and still exceeded it by this amount in 1983-87 despite the declines. The 1973-77 IMRs of Cochise and Coconino counties exceeded the state IMR by at least 10 percent but the decline reduced the difference to less than 4 percent in 1983-87. Mohave and Yuma counties began the 15-year period with lower IMRs than the state and ended it in the same manner. Yavapai county had a 1973-77 IMR lower than the state but 1978-82 and 1983-87

j The references, indicated by superscript numbers, are given at the end of the section because of their quantity.

IMRs higher than the state. Pima, unlike Maricopa the other metropolitan county, had a lower IMR than the state in each time period and the lowest IMR among the counties in 1973-77 and 1978-82. Maricopa and the state's IMRs were almost equal in each period, an expected finding since Maricopa accounted for the largest share of live births and deaths.

Several counties had too few deaths in a five-year period for reasonably reliable rates after subdividing by period or cause of death. To increase the reliability of rates, larger numbers were needed or some counties had to be grouped. The grouping principle used was empirical, i.e. counties had identical temporal patterns in IMR in the comparisons above. Therefore, Apache, Navajo and Pinal counties were grouped and called Rural A; Cochise and Coconino formed Rural B; and Mohave and Yuma became Rural C. These three rural groupings were used in subsequent analyses in addition to Maricopa and Pima counties. Yavapai county had to be excluded because its temporal pattern was unique and its number of infant deaths too small. The five regions accounted for more than 93 percent of births and infant deaths statewide in each time period. Figure 1 graphically depicts each region's decline and the convergence among regions in infants' mortality risk through time.

Temporal Trends in Neonatal and Postneonatal Mortality by Region

The only temporal change between adjacent five-year periods consistent for every region was the decline from 1973-77 to 1978-1982 in neonatal mortality rate (NMR) (Table 4-2). From 1978-1982 to 1983-1987, Pima's increase in NMR differed from the decreases for the other regions. This difference reversed Pima's standing in neonatal mortality from lowest among the regions in 1973-82 to highest in 1983-87. Maricopa's NMR was the second highest in all periods and almost identical to Pima's in the latest.

Postneonatal mortality rates (PNMR) never consistently changed for all regions because Rural C progressively worsened while the other regions improved. The PNMRs for the four improving regions declined more from 1973-77 to 1978-82 (range = 7.5 to 41.2 percent) than from 1978-82 to 1982-87 (range = 2.1 to 12.3 percent). Maricopa and Pima had the lowest PNMRs among the regions over time, with Pima lower than Maricopa.

Thus, regions differed in the temporal trends in neonatal and postneonatal mortality underlying their decline in infant mortality. Four distinct temporal patterns were seen: 1) Rural A's and Rural B's declines of nearly equal magnitude in both neonatal and postneonatal mortality between adjacent five-year periods; 2) Maricopa's substantially, i.e. 2.5 to 10 times, larger declines in neonatal than postneonatal mortality between adjacent periods; 3) Rural C's declines in neonatal combined with increases in postneonatal mortality between adjacent periods; and 4) Pima's changes of opposite direction in neonatal combined with declines in postneonatal mortality between adjacent periods. The regions with equally great declines in neonatal and postneonatal mortality had the largest decrease in infant mortality through time (Rural A and Rural B).

Temporal Trends in Cause-Specific Mortality by Region

The following specific causes of infant death were examined (the ICD codes from the eighth and ninth revisions defining the causes are given in Note #1 at the end of the section): Sudden Infant Death Syndrome (SIDS); Disorders related to short gestation and unspecified low birth weight (disorders related to SG/LBW); Other specified conditions in the perinatal period; Infectious and gastrointestinal diseases; Congenital anomalies; and Unintentional injuries. All significant differences in cause-specific mortality rates were based on 95 percent confidence intervals. The breadth of the confidence interval increases as the number of live births in a region decreases and the value of the mortality rate increases. Therefore, the difference between observed rates had to be greatest to

achieve statistical significance when Rural C was involved in the comparison, when the rates were greater than 2.0 or when both conditions applied. Discussion of the data in Table 4-3 is organized by region.

Rural A (Apache, Navajo and Pinal counties). In every time period, Rural A significantly exceeded the metropolitan areas in rates of infant death due to unintentional injuries and infectious and gastrointestinal diseases, conditions typically implicated in postneonatal death. Its unintentional injury death rate did not improve significantly from 1973-77 to 1983-87 but the infectious and gastrointestinal disease death rate did. Nonetheless, Rural A infants in 1983-87 were at least 2.7 times more likely to be an unintentional injury fatality than infants in any other region and 4.3 times more likely to die of an infectious or gastrointestinal disease than metropolitan infants. In contrast, infants in this region were significantly less likely to die from SIDS than infants in any other region and less likely to die from disorders related to SG/LBW than Maricopa infants.

Rural B (Cochise and Coconino counties). Infant death rates from disorders related to SG/LBW in Rural B significantly declined since 1973-77 and were significantly lower than the rate for Maricopa in the latest period. This area also significantly improved in infant death rates due to four of the five other specific causes (SIDS excepted) from 1973-77 to 1983-87. Infants in this region in 1983-87 compared to metropolitan infants had significantly greater death rates from infectious and gastrointestinal diseases and all other causes. All other causes combined assorted, generally nonspecific causes, e.g. symptoms, signs and ill-defined conditions. Rural A and Rural B each have at least 6 geographic service areas designated as Health Manpower Shortage Areas (HMSAs) with the highest degree of shortage rating.[13] Health manpower undersupply may make it less likely that death records are certified by physicians. (Moreover, many HMSAs are Indian reservations exempted from the certification statutes applying to non-reservations.) The persons who certify in lieu of a physician may be more likely to ascribe death to nonspecific causes.

Rural C (Mohave and Yuma counties). Infant death rates from congenital anomalies and from other specified conditions in the perinatal period significantly improved over ten years in Rural C. Death rates due to SIDS significantly worsened through time while those due to LBW and infectious and gastrointestinal diseases were unchanged. In 1983-87, infants in Rural C were 2.7 times more likely to die of infectious and gastrointestinal diseases than metropolitan infants but equally likely to die of SIDS. At the same time, they were 50 percent less likely to die from other perinatal conditions relative to Pima infants and from disorders related to SG/LBW compared to Maricopa infants.

Maricopa county. Both disorders related to SG/LBW and SIDS claimed the lives of Maricopa infants at significantly higher rates in 1983-87 than 1973-77. The 1983-87 infant death rate from disorders related to SG/LBW in Maricopa was significantly greater than the rate in any other region and also the highest death rate from this cause seen in any region in any time period examined. In contrast, the 1983-87 SIDS death rate for Maricopa infants significantly exceeded the rates of only two regions, Pima and Rural A. Maricopa compared to Pima infants were 62.5 and 38.5 percent more likely to die from disorders related to SG/LBW or SIDS respectively. Infant death rates due to other perinatal conditions, congenital anomalies, infectious and gastrointestinal diseases and unintentional injuries significantly declined and were at their lowest level in Maricopa in 1983-87.

Pima county. The death rate from disorders related to SG/LBW also rose from 1973-77 to 1983-87 for Pima, but that growth brought it to the level of the rural regions. Pima's ten-year decline in the death rate from other perinatal conditions was the smallest among the regions, so its 1983-87 rate was highest among the regions. Pima infants died from other perinatal conditions at a rate which significantly exceeded Maricopa's by 41.6 percent,

Rural A's by 30.8 percent and Rural C's by 100 percent. Forty-seven of every 100 infant deaths in Pima were either from disorders related to SG/LBW or other perinatal conditions. The SIDS death rate of Pima infants increased from 1978-82 to 1983-87 but was the second lowest rate among the regions in the last period. Death rates from congenital anomalies and infectious and gastrointestinal diseases significantly declined to Pima's lowest level in 1983-87.

Discussion

In 1983-87 in contrast to the two earlier time periods, the lowest IMR did not occur in a metropolitan county but in Rural C. The hypothetically lowest IMR, i.e. the sum of the lowest observed NMR and PNMR among regions, occurred in Pima county in both 1973-77 and 1978-82. By 1983-87, the hypothetically lowest IMR of 7.0 (the sum of the NMR for Rural C and the PNMR for Pima) was not observed. Why was the hypothetically lowest IMR not a reality in 1983-87 as it was in the two earlier periods?

One factor involved was the lack of improvement in neonatal mortality for Pima county from 1978-82 to 1983-87, thereby reversing its position among regions in NMR from best to worst. The second worst region in NMR was the other metropolitan county of Maricopa. All Level III intensive care centers and seven of the nine intermediate care or Level II centers of the regionalized newborn intensive care program are located in the metropolitan regions.[14]

Why then did both metropolitan regions have worse neonatal mortality than the rural regions in 1983-87? Since low birthweight (LBW) is a prime determinant of neonatal death,[15] the regional distribution of 1983-87 LBW newborns was obtained for four weight categories: less than 1,000 grams (g); 1,000-1,500 g; 1,501-2,250 g; and 2,251-2500 g. The distribution of LBW babies' weights differed significantly among regions primarily because infants of less than 1,000 g were overrepresented in Maricopa and underrepresented in Rural A and Rural B (Table 4-4). In addition, babies weighing 1,001-1,500 g occurred less frequently than expected in Rural C and newborns of 2,251-2,500 g occurred less than expected in Maricopa and more frequently than expected in Rural B.

Newborns of the lowest weight were very likely the "sickest" of the LBW babies and they did occur significantly more frequently in Maricopa compared to two rural regions. The latest determination[16] of the mortality risk of newborns of less than 1,000 g was 71 percent for the neonatal period (or 710 per 1,000 births) and a further 13.5 percent of the neonatal survivors died before their first birthday (or 135 per 1,000 neonatal survivors). In other words, only one out of four newborns of this weight survived infancy.

The significantly greater frequency of newborns of under 1,000 g in Maricopa than the rural regions appears to underlie its deteriorating death rates from disorders related to SG/LBW.[k] Higher rates of the lowest weight newborns because of lower rates of fetal mortality did not explain this situation because Maricopa and the two rural regions did not significantly differ in fetal mortality rates in the latest period. Future specific research is needed to address other factors which may be explanatory either individually or in combination. Are women in Maricopa more likely to give birth to infants of less than 1000 g than women in rural regions or women in Pima? Are newborns of this weight more likely to be considered viable in Maricopa than in rural regions or in Pima? Do standards of neonatal care for very low weight newborns differ within and between regions?

k Maricopa also accounted for an increasingly greater percentage of newborns of less than 1,000 g in the state, rising from 54.4 percent in 1983 to 64.7 percent in 1987.

Other specified conditions in the perinatal period rather than a LBW distribution skewed to the low end appear to be the "sicknesses" of newborns which underlie Pima's stagnant neonatal mortality rate. Pima's regional standing on death rates from these conditions reversed from best in 1973-77 to worst in 1983-87 and was 42 percent greater than Maricopa's rate in the latest period. In turn, Maricopa's death rate significantly exceeded the rate of Rural C by 41 percent. If the death rate from these conditions for Maricopa and Pima had been the same as Rural C's in the latest period, 201 more babies would have lived beyond their first birthday. Given that this cause captures several diverse conditions (e.g. maternal complications, infant respiratory distress syndrome), a detailed examination of those conditions and their amenability to change will be necessary before specific prevention strategies can be recommended.

A system of specialized medical technology and treatment known as Neonatal Intensive Care (NIC) contributed importantly to improved neonatal survival in Arizona, many other areas of the country[17] and the nation.[18] However, questions are raised increasingly as to a) whether NIC has reached its maximum impact on newborn survival and b) whether NIC has postponed infant deaths from the neonatal to the postneonatal period.[19] Rural C was the only region with worse postneonatal mortality over the 15 years. In 1983-87, its neonatal mortality rate was the lowest among the regions and most of its cause-specific mortality rates more resembled metropolitan than other rural rates. The exception was infectious and gastrointestinal diseases and Rural C made least progress in reducing death rates from this cause. These findings suggest future investigation of whether this region's increased postneonatal death rate reflects a postponement of neonatal death. More specifically, are vulnerable neonatal survivors (e.g. LBW) particularly susceptible to infectious and gastrointestinal diseases? Prior research[20] has found LBW compared to higher weight infants at increased risk of death from infections and diarrhea.

Rural A and Rural B were unique among the regions in reducing neonatal and postneonatal death rates by large and almost equal amounts. However, while their neonatal mortality rates were better than the metropolitan rates, their postneonatal mortality rates remained elevated relative to metropolitan areas. Reductions in postneonatal mortality typically have been attributed not to advances in medical technology but to improvements in standards of living (e.g. socioeconomic status), health habits, hygiene and nutrition.[21] Further improvements in these social and environmental factors appear necessary for future declines in postneonatal and infant mortality for these regions.

The convergence through time among regions' infant mortality rates did not arise from commonly shared temporal trends in neonatal mortality, postneonatal mortality or cause-specific mortality. Regional differences in temporal trends and areas of concern in the latest period were evident. These findings suggest that future progress in reducing infant mortality for the state requires tailoring of programs to distinct regional needs. The results further suggest that statewide progress will require simultaneous attention to both neonatal and postneonatal mortality. For some regions, follow-up studies addressing questions which this report could not answer with available data will help to inform the content of needed programs. Finally, the dissimilar routes of regions to better infant mortality rates warn us not to over-generalize and apply programs effective in one area to another. The challenge facing us is to develop regionally-appropriate population-based strategies[22] to improve infants' odds to reach their first birthday.

TABLE 4-1

INFANT MORTALITY RATES (IMR) AND NUMBER OF INFANT DEATHS BY COUNTY[a] AND THREE FIVE-YEAR PERIODS

COUNTY	TIME PERIOD 1973-77		1978-82		1983-87	
Apache	18.9	(138)[b]	15.8	(131)	10.9	(99)
Cochise	16.1	(120)	12.9	(101)	9.8	(77)
Coconino	20.7	(153)	13.0	(112)	9.8	(92)
Maricopa	14.3	(1,455)	12.3	(1,607)	9.5	(1,565)
Mohave	13.3	(37)	14.0	(56)	8.8	(45)
Navajo	22.0	(175)	14.6	(133)	11.5	(110)
Pima	11.2	(411)	9.0	(387)	9.0	(456)
Pinal	16.9	(142)	10.6	(96)	10.9	(108)
Yavapai	14.5	(49)	12.6	(59)	10.2	(55)
Yuma[c]	13.1	(103)	12.0	(108)	8.7	(91)
ARIZONA	14.7	(2,929)	11.9	(2,909)	9.5	(2,773)

a The counties included are limited to those which accounted for at least one percent of infant deaths in the state in each five-year period.

b Number of infant deaths is in parentheses.

c The 1983-87 period includes La Paz county with Yuma county because they were combined in the earlier periods.

TABLE 4-2

TEMPORAL PATTERNS OF INFANT (IMR), NEONATAL (NMR) AND POSTNEONATAL (PNMR) MORTALITY RATES BY COUNTY GROUP

COUNTY GROUP		1973-77	1978-82	1983-87
Rural A	IMR	19.7	13.6	11.1
(Apache, Navajo	NMR	9.7	7.1	5.4
and Pinal)	PNMR	10.0	6.5	5.7
Rural B	IMR	18.4	13.0	9.8
(Cochise and Coconino)	NMR	10.4	8.3	5.3
	PNMR	8.0	4.7	4.5
Rural C	IMR	13.1	12.6	8.8
(Mohave and Yuma)	NMR	9.1	7.9	4.0
	PNMR	4.0	4.7	4.8
METROPOLITAN:MARICOPA	IMR	14.3	12.3	9.5
	NMR	10.3	8.6	5.9
	PNMR	4.0	3.7	3.6
METROPOLITAN:PIMA	IMR	11.2	9.0	9.0
	NMR	7.5	5.9	6.0
	PNMR	3.7	3.1	3.0

TABLE 4-3

TEMPORAL PATTERNS OF CAUSE-SPECIFIC INFANT MORTALITY RATES BY COUNTY GROUP[a] AND FOR STATE

CAUSE/TIME PERIOD		COUNTY GROUP[a] RURAL A	RURAL B	RURAL C	MARICOPA	PIMA	TOTAL STATE
Sudden Infant Death Syndrome	1973-77	1.8	1.7	1.0	1.2	1.1	1.3
	1978-82	1.2	1.2	1.7	1.9	0.9	1.6
	1983-87	1.0	1.6	1.7	1.8	1.3	1.6
Short Gestation/Low Birthweight	1973-77	1.0	1.2	0.7	1.0	0.4	0.8
	1978-82	0.5	0.7	1.0	0.9	0.6	0.8
	1983-87	0.8	0.7	0.6	1.3	0.8	1.1
Other specified conditions in perinatal period	1973-77	6.0	6.5	5.2	6.4	4.0	5.8
	1978-82	4.5	5.0	3.8	4.9	3.1	4.4
	1983-87	2.6	3.0	1.7	2.4	3.4	2.6
Congenital anomalies	1973-77	2.7	2.8	3.4	2.8	3.1	2.9
	1978-82	3.2	2.9	3.5	2.8	2.6	2.9
	1983-87	2.6	1.7	2.5	2.4	2.2	2.3
Infectious and gastrointestinal diseases	1973-77	4.3	2.5	1.0	1.2	0.9	1.6
	1978-82	1.5	1.5	0.8	0.5	0.6	0.8
	1983-87	1.3	0.7	0.8	0.3	0.3	0.5
Injuries	1973-77	0.8	0.7	0.6	0.5	0.1	0.5
	1978-82	0.4	0.3	0.3	0.3	0.3	0.3
	1983-87	0.8	0.2	0.2	0.2	0.3	0.3
All Other Causes	1973-77	3.1	3.0	1.7	1.4	1.6	1.8
	1978-82	2.3	1.3	1.5	1.1	0.8	1.2
	1983-87	2.1	1.9	1.2	1.0	0.7	1.1
All Causes[b]	1973-77	19.7	18.3	13.2	14.3	11.2	14.8
	1978-82	13.6	13.0	12.6	12.3	9.0	11.9
	1983-87	11.1	9.8	8.8	9.5	9.0	9.5

a Rural A = Apache, Navajo and Pinal; Rural B = Cochise and Coconino; Rural C = Mohave and Yuma

b Cause-specific rates may not total to all cause rate due to rounding.

TABLE 4-4

PERCENT DISTRIBUTION OF WEIGHT[a] AMONG LOW BIRTHWEIGHT BABIES BY REGION, 1983-87

Weight	Rural A	Rural B	Rural C	Maricopa	Pima	Total
< 1,000	6.3***	6.2**	7.0	8.5**	7.7	7.9
1,001-1,500	9.9*	9.0	7.1**	9.0	9.3	9.1
1,501-2,250	39.4	38.5	40.1	39.4	38.2	39.2
2,251-2,500	44.4	46.3*	45.7	43.1*	44.8	43.8
# of babies	1,807	1,159	827	10,360	3,106	17,259

Chi-Square = 26.33, p = .01

[a] Weight expressed in grams

* Difference from expected value accounted for five to six percent of significant Chi-square.

** Difference from expected value accounted for 13 to 18 percent of significant Chi-square.

*** Difference from expected value accounted for 23 percent of significant Chi-square.

FIGURE 1.

PATTERNS OF INFANT MORTALITY BY COUNTY GROUP AND TIME PERIOD, ARIZONA, 1973 - 1987

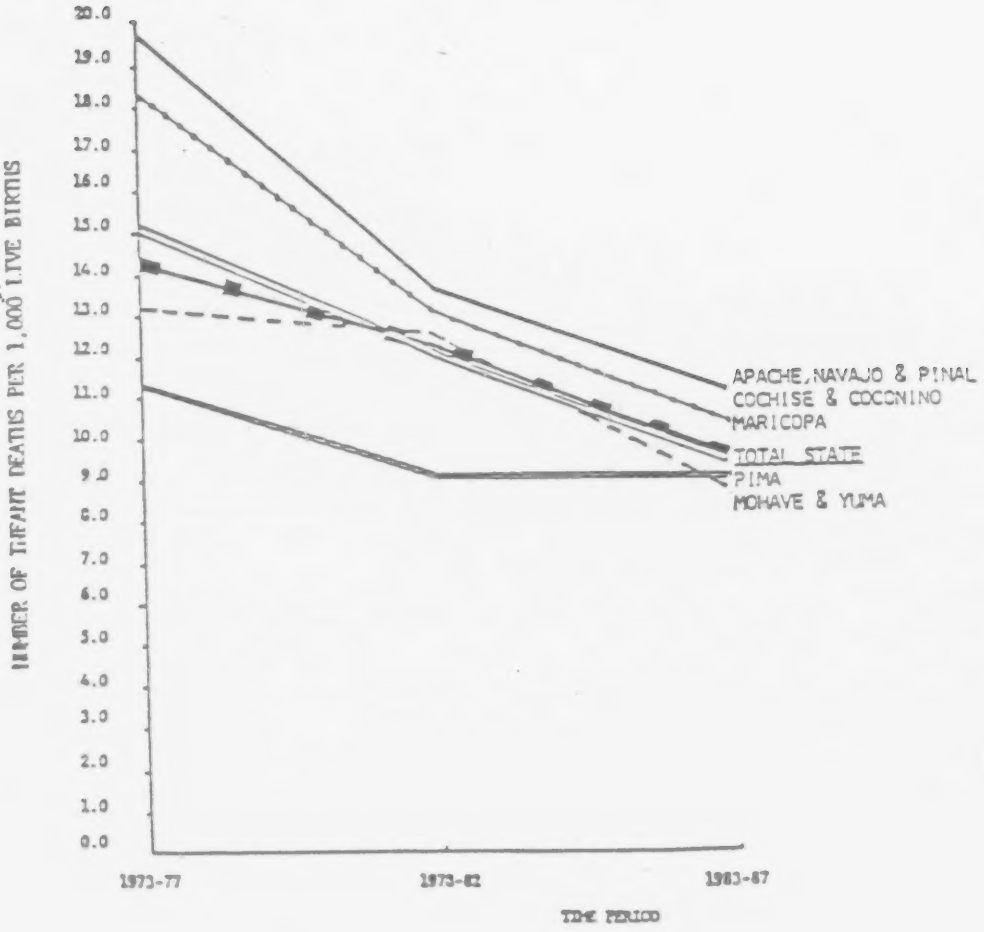
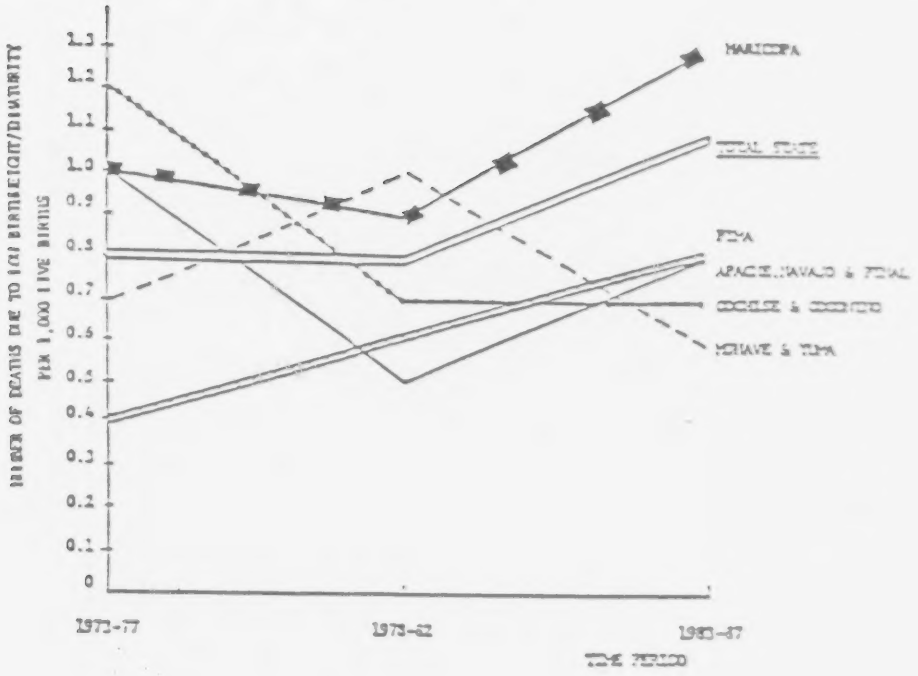


FIGURE 2.

PATTERNS OF INFANT MORTALITY DUE TO SHORT GESTATION/LOW BIRTHWEIGHT BY COUNTY GROUP AND TIME PERIOD, ARIZONA, 1973-1987



NOTES

#1. The International Classification of Disease codes for each of the selected causes of infant death examined in the section are given in parentheses following the cause. The first number(s) in parentheses is the code from the Eighth Revision covering 1973-78; the second number(s) after the semicolon is the code from the Ninth Revision covering 1979 to 1987. The causes and codes are: Sudden Infant Death Syndrome (795.0; 798.0); Disorders related to short gestation/low birth weight (777; 765); Infectious and gastrointestinal diseases (000-136, 480-486, 535, and 560-569; 000-139, 480-487, 535, 555-558, and 560-569); Other specified conditions in the perinatal period (760-776, 778-779; 760-764, 766-779); Unintentional injuries (800-949; 800-949); and Congenital anomalies (740-759; 740-759).

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MORBIDITY

Data on morbidity, levels of disease and disability in the population, were obtained for the entire 1987 population of Arizona only for certain communicable or infectious diseases which must be reported by law. The Division of Disease Prevention Services of the Arizona Department of Health Services (ADHS) does the surveillance and monitoring of these reportable diseases and has provided the data on these diseases for this report. In addition, that Division, in particular its Office of Infectious Disease Services, prepared the subsections of this chapter which deal with sexually transmitted diseases and Human Immunodeficiency Virus (HIV) infection/Acquired Immunodeficiency Syndrome (AIDS).

Non-Sexually Transmitted Diseases

Routine immunization against the diseases of measles, mumps, pertussis (whooping cough) and rubella (German measles) is essential to prevent the development of these diseases and their consequences on morbidity and mortality, especially among infants and children. Among these four diseases in 1987, the incidence of reported cases was highest for mumps, followed by pertussis, measles and rubella (Table 5-1). The 1987 incidences of reported cases of measles, mumps, pertussis and rubella were not the highest since 1982. The 1986 reported number of measles cases was seven times higher than the number in 1987. However, the 1987 incidence rate per 100,000 population of reported measles (1.04) exceeded the 1982 incidence rate of 0.59 cases per 100,000 population. The 1987 incidence rates of reported mumps and pertussis were also higher than their respective 1982 rates. Reported cases of pertussis occurred at a rate 26.9 percent higher in 1987 than 1982 (rates of 1.18 and 0.93 respectively). The increase in the incidence rate of reported mumps was much larger with the 1987 rate (5.65) 158 percent greater than the 1982 rate (2.18). Only reported cases of rubella occurred in lower numbers and at a lower rate in 1987 than 1982.

The vaccine to prevent chickenpox is yet to be licensed for routine use. Individual cases rather than group outbreaks of chickenpox were reported for the first time in 1987. This improved system of reporting primarily accounted for the nearly doubled incidence of reported chickenpox from 1986 to 1987. The new vaccine to prevent Haemophilis influenza (H flu) type B infection may have reduced the incidence of reported cases of H flu meningitis from 1986 to 1987. However, the 1987 incidence rate of this disease (2.59 per 100,000) was greater than the 1982 rate (1.73 per 100,000).

Among the diseases affecting the central nervous system which are not vaccine preventable, the 1987 incidence rates per 100,000 population of reported meningococcal meningitis (0.58) and viral encephalitis (0.49) were lower than the 1982 rates (0.62 and 0.55 respectively. In contrast, the 1987 incidence rate of 4.35 reported cases of aseptic meningitis was 282 percent greater than the 1982 incidence rate of 1.14. Virtually no change occurred in the number of persons afflicted with aseptic meningitis from 1986 and 1987. The 1986 and 1987 incidences of bacterial meningitis were much larger than the annual incidences in the prior four years because the new reporting definition included the H Flu and meningococcal forms with the other bacterial form. When the same definition was used, the 1986 and 1987 incidences nearly equalled the 1985 incidence.

The enteric disease responsible for the greatest number of people reported ill in 1987 was shigellosis. Almost nine more cases of this disease were reported per 100,000 people in 1987 than 1982 (rates of 34.22 and 25.55 respectively). From 1984 to 1986 giardiasis was the most prevalent reported enteric disease, but its 1987 incidence was 559 cases lower than the six-year high in 1984. Nonetheless, reported cases of giardiasis occurred at a

67.6 percent higher rate in 1987 (25.17) than 1982 (15.02), indicating that ten more people per 100,000 were reported to have giardiasis. Some of that increase may have stemmed from recent studies of the prevalence of infection with the parasite for giardiasis among children in day care. Children may be infected but not have any symptoms of the disease.

The 1987 incidence rates of amebiasis, salmonellosis and typhoid were lower than their corresponding 1982 rates, although the decrease translated into less than one fewer case per 100,000 population for each disease. Campylobacteriosis increased most in incidence from 1982 to 1983 and remained fairly constant thereafter. This disease posed less of a morbidity risk to people in 1987 than in 1983 due to a 9.1 percent reduction in its incidence rate (16.63 and 18.26 respectively).

Coccidioidomycosis, or valley fever, is endemic to Arizona and persons become infected through inhalation of dust laden with the spores of the fungus. The primary form of the disease is an acute, self-limiting respiratory disease. However, about one-quarter of persons infected develop either persistent pulmonary disease or a disseminated form of the disease involving many organ systems which is often fatal.[23] Persons with suppressed functioning of their immune system, e.g. individuals with HIV infection, are at high risk for dissemination of the disease. Reports of cases of coccidioidomycosis do not distinguish between the primary, persistent pulmonary and disseminated forms. The incidence rate of reported cases of valley fever declined 32.2 percent from 8.7 per 100,000 in 1982 to 5.9 in 1987. In the early 1970s, the incidence rate of valley fever was over 26 cases per 100,000 or more than four times greater than in 1987. Yet, despite the declining incidence rate, the mortality rate due to coccidioidomycosis did not decrease from 1970 to 1987. The annual rates of death from valley fever erratically varied from a low of 0.4 (1972) to a high of 1.4 (1975) during those 18 years. Thus, the case fatality ratio, i.e. the incidence rate divided by the mortality rate, of valley fever increased 9.1 times from 1.5 for 1970-77 to 13.7 for 1980-87.

Valley fever can occur as an opportunistic disease in persons infected with HIV as can tuberculosis (TB) if those persons also are infected with the tubercle bacillus.[24] However, the opportunistic development by HIV-infected persons of active TB has significance for control of disease in the community because TB is communicable while valley fever is not. Heightened likelihood of reactivation of TB among people with HIV infection may result in an increasing incidence of TB as HIV increases in future years. Seventy-five fewer cases of pulmonary TB were reported in 1983 than 1981. After this decrease, the incidence of reported pulmonary tuberculosis was stable for the next three years and then rose in 1987. It is too early to know if the increase in the pulmonary TB incidence rate from 6.41 in 1986 to 6.77 in 1987 is the start of an increasing trend.

For the first time since 1980,[m] reported cases of Hepatitis B did not increase annually. Indeed, the incidence rate of reported Hepatitis B dropped 7.0 percent from 26.56 per 100,000 in 1986 to 24.71 in 1987. Contrastingly, the incidence rate of reported cases of Hepatitis A increased 38.4 percent from 42.57 per 100,000 in 1986 to 58.92 in 1987. The 1987 incidence rates of Hepatitis A and Hepatitis B were both 2.7 times higher than their respective 1982 incidence rates. The highest annual incidence of reported cases of Non-A, Non-B Hepatitis occurred in 1985; 103 fewer cases were reported in 1987 for an incidence rate of 3.86 per 100,000. In keeping with increasingly better differential diagnosis of the

23 Hoeprich PD (Ed): Infectious Diseases, 3rd Edition. NY: Harper & Row, 1983.

24 Centers for Disease Control: Human Immunodeficiency virus infection in the United States: a review of current knowledge. MMWR 1987; 36 (suppl. no. S-6): 1-48.

m Reported cases of Hepatitis B were 184 and 191 in 1980 and 1981 respectively.

three specific types of Hepatitis, the number of reported cases of unspecified Hepatitis dropped to its lowest level of the decade in 1987.[n]

Among the zoonotic diseases or those diseases in which an animal other than Homo sapiens plays a role in disease transmission, forty fewer cases of rabies were reported in animals in 1987 than 1985. No rabies was reported in humans in 1987. Moreover, no human being has contracted rabies in Arizona in this decade. The number of cases of malaria reported in 1987 was the highest of the 1982 to 1987 period. Two plague cases were reported in 1987, but this incidence was much smaller than the ten cases in 1983 or the five cases in 1982. Tularemia reports were less than five throughout this decade.

The 1987 incidence rate of reported cases of Toxic Shock Syndrome (TSS) was 1.37 per 100,000 women 15 to 44 years of age. While not the highest incidence rate of the six years, it was 204 percent higher than the 1982 incidence rate of 0.45 per 100,000 women aged 15 to 44 years. In 1987, warnings about TSS were on tampon products and at least one such product implicated in TSS had been removed from the market.

Sexually Transmitted Diseases

The four sexually transmitted diseases (STD's) reportable in Arizona are chlamydia, gonorrhea, genital herpes and syphilis (Table 5-1). The incidence of reported chlamydia, genital herpes and syphilis increased from 1986 to 1987. Reported cases of gonorrhea decreased but reports of gonorrhea strains resistant to pencillin increased from 143 in 1986 to 256 in 1987. Efforts to reduce the incidence of STD's and avert the diseases' associated adverse health consequences are ongoing by state and local STD programs.

National estimates indicate that chlamydia is the most common STD. This infection became reportable in Arizona in 1987. In 1986, when reporting was voluntary, the ADHS was notified of 811 cases. During 1987, reported cases increased to 2,948. Screening programs aimed at identifying asymptomatic infected women acccounted for the higher incidence of chlamydia among women than men (Table 5-2). Chlamydial infections cause many adverse health effects including pelvic inflammatory disease, infertility and neonatal ophthalmic and pulmonary infections. Incidence rates of reported cases are expected to increase in coming years as screening and surveillance systems improve. Early detection should reduce disease complications.

Reported cases of gonorrhea declined from 8,030 in 1986 to 6,552 in 1987, the lowest incidence of the past six years (Table 5-1). The 1987 rate of gonorrhea infections was 189 per 100,000 population, 32 percent lower than the 1990 national objective of no more than 280 cases per 100,000. The 1987 incidence of 281 reported cases of gonococcal pelvic inflammatory disease (PID) was also the lowest of the past 6 years. The incidence rate of 16.0 PID cases per 100,000 females in 1987 was 73 percent lower than the 1990 national objective of 60 cases per 100,000 females.

Review of demographic information revealed no major change in the ethnic distribution of gonorrhea infections from 1986 to 1987. Blacks and Hispanics had a higher incidence than expected based on their representation in Arizona's population (Table 5-3). Morbidity due to gonorrhea was greater for males than females in 1987 (Table 5-2) as it has been traditionally. However, the gender differential has diminished annually since 1985. This

[n] Non-A, non-B Hepatitis became a notifiable disease in 1982.

trend also may reflect decreased morbidity among the homosexual population due to behavioral changes brought about by the HIV epidemic.

Cases of penicillin resistant strains of gonorrhea were at an all time high in 1987. Antimicrobial resistance in the gonococcus can be plasmid-mediated, chromosomally mediated or both. From a public health standpoint, the most important strains are penicillinase-producing Neisseria gonorrhoeae (PPNG) and chromosomally mediated resistance to penicillin (CMRNG). PPNG are gonococcal strains with an extrachromosomal element or plasmid that encodes for beta-lactimase, an enzyme that renders penicillin ineffective by destroying the beta-lactim ring of penicillin and first generation cephalosporins. The number of reported PPNG cases in Arizona remained stable at 36 in 1986 and 1987.

CMRNG are gonococcal strains that do not produce beta-lactimase but have chromosomal resistance to penicillin. Chromosomally mediated resistance is not limited to penicillin but can include resistance to many other antimicrobial agents. The number of identified CMRNG cases more than doubled from 77 in 1986 to 210 in 1987. The increases were primarily in Maricopa and Pima counties. These counties accounted for 97 percent of the cases of pencillin resistant gonorrhea reported in 1987 (Table 5-3). Abandonment of penicillin as a drug of choice for the treatment of gonorrhea should be seriously considered in these counties.

Early syphilis increased 19 percent with 512 cases reported in 1987 compared to 430 cases in 1986. The increase occurred in all age groups, in all ethnic groups except Native Americans and in both genders. Relative to the representation of each ethnic group in Arizona's population, the incidence of disease was disproportionally greater for Hispanics, Blacks and Native Americans and disproportionally lower for whites and Asians (Table 5-3).

Annual incidences of syphilis among females steadily increased since 1983. Increased disease incidence among females and the pronounced prevalence of disease among young adults in the prime reproductive years of 20 to 39 years (Table 5-3) enhance the probability of congenital infections.

Late syphilis increased 80 percent from 227 cases reported in 1986 to 409 cases reported in 1987. Hispanics had the greatest one-year increase in cases of late syphilis reported to the ADHS. Reports from the U. S. Immigration and Naturalization Service's Amnesty program implemented during 1987 largely contributed to the Hispanic increase. Under this program, Arizona's illegal immigrants from mainly Hispanic nations were offered legal residence in the U. S. if certain requirements including a blood test for syphilis were met. This test was probably avoided by Hispanic illegal residents of Arizona in prior years when the fear of deportation was not mitigated by the incentive of legal residence.

Acquired Immunodeficiency Syndrome

Infection with the Human Immunodeficiency Virus (HIV), the AIDS virus, continued to cause significant morbidity and mortality among Arizonans in 1987. In January 1987, both AIDS Related Complex (ARC) and HIV seropositivity in individuals became reportable in Arizona. As a result over 1,100 persons were reported with HIV infection during 1987, including 231 AIDS cases, 73 ARC cases and 794 HIV seropositive individuals. Since the first case of AIDS diagnosed in an Arizona resident in 1981 until December 31, 1987, 504 AIDS cases, 152 ARC cases and 794 seropositive individuals (HIV Ab+) have been reported for a total of 1,450 HIV infected persons (Table 5-4).

The 231 AIDS cases diagnosed and reported to the ADHS in 1987 represented a 55 percent increase over the 149 cases diagnosed in 1986 and accounted for 46 percent of the 504 cumulative AIDS cases diagnosed since 1981 (Table 5-5). New HIV reporting rules, laboratory reporting of HIV seropositives, increased physician awareness, county health department sponsored counseling and testing sites, active surveillance for HIV and the continuing spread of the HIV infection contributed to the increase in reported infections.

It is important to note that in September 1987 the Centers for Disease Control revised the 1985 criteria defining AIDS for surveillance purposes. The 1985 AIDS case definition was revised to include HIV encephalopathy, HIV wasting syndrome and a broader range of AIDS-indicative diseases (e.g., disseminated coccidioidomycosis) as well as to reflect new diagnostic practices and widespread laboratory testing. The 1987 definition gives a more accurate representation of the true morbidity due to HIV infection. As a result, 94 cases reported as ARC prior to 1987 were reclassified as AIDS cases. Thus, the change in case definition alone resulted in a 28.3 percent increase in the number of reported AIDS cases in Arizona (Figure 3). This increase was not uniform by ethnicity. The increase was most apparent among Blacks with 10 of 19 (53 percent) total cases reclassified due to the 1987 revised definition.

Case Fatality. Approximately 41 percent of those diagnosed with AIDS in 1987 had died by the end of the year, a decrease from 59 percent in 1986 (Table 5-5). Fifty-seven percent of the cumulative cases had died as of December 31, 1987. Earlier diagnosis and new treatment modalities may account for the decrease in the AIDS case fatality rate from 1986 to 1987.

Geography. Incidence of reported AIDS cases continued to be highest in metropolitan areas (Table 5-6). Maricopa and Pima counties accounted for 95 percent of AIDS cases diagnosed and reported since 1981. No diagnosed case of AIDS was reported from Graham, Greenlee, LaPaz or Santa Cruz counties by the end of 1987. It is expected on a national level, however, that the percentage of rural AIDS cases will slowly increase in relation to metropolitan areas.

Gender. The male to female reported AIDS case ratio decreased from 29:1 in 1986 to 13:1 in 1987 (Table 5-5). Of the 27 cumulative female AIDS cases since 1981, 16 or 59 percent were diagnosed in 1987. The majority of new cases in 1987 continued to be male.

Risk Behavior. Of the 231 cases diagnosed in 1987, 156 (68 percent) claimed homosexual or bisexual sex as their sole risk behavior, 22 (10 percent) claimed intravenous drug abuse (IVDA) as their sole risk behavior and 14 (6 percent) claimed both homosexual/bisexual sex and intravenous drug abuse as risk behaviors (Table 5-7). The percentage of AIDS cases associated with homosexuality/bisexuality has slowly declined (7 percent) since 1985, while cases associated with blood transfusions, hemophilia and intravenous drug abuse have increased. Among the 27 female AIDS cases, 37 percent acquired the infection through blood or blood products, 26 percent acquired the virus by sharing IV needles and syringes, 26 percent through heterosexual contact with a male at risk, and 11 percent through other routes (Figure 5).

Race/Ethnicity. Whites accounted for 193 (84 percent) of AIDS cases diagnosed in 1987, Hispanics for 23 (10 percent) and Blacks for 10 (4 percent) (Table 5-8). The ethnic-specific relative risk of disease, when compared to whites and based on cumulative cases, was 1.2 for Blacks, 0.47 for Hispanics, 0.46 for Asians and 0.13 for Native Americans. A comparison of Arizona and United States ethnic-specific rates shows that AIDS is less common among the ethnic minority population of Arizona than the nation. The majority of cumulative white and Hispanic AIDS cases were gay or bisexual, while cumulative Black

AIDS cases were almost equally likely to be either gay/bisexual or intravenous drug abusers (Figure 6). However, the percentage of AIDS cases associated with IV drug abuse was 6 and 3 times greater for Blacks and Hispanics respectively than whites.

Age. Most Arizona AIDS cases continued to be diagnosed among persons 20 to 49 years of age. Since 1981, 88 percent of all AIDS cases have been diagnosed among persons between these ages (Table 5-4). The median age of HIV seropositive individuals (33.5 years) was 1.5 years younger than the median age of AIDS cases (34.8 years) reflecting the incubation period. Two pediatric (under 13 years of age) cases were diagnosed in 1987.

Projected Cases. Utilizing the Public Health Service estimate of 365,000 U. S. AIDS cases by the end of 1992, it is expected that 2,920 AIDS cases will be diagnosed in Arizona by the end of 1992 (Figure 7). This trend estimates that the number of AIDS cases will double every 14 months.

TABLE 5-1

NUMBER OF REPORTED CASES OF SELECTED NOTIFIABLE DISEASES BY CATEGORY, 1982 - 1987

DISEASE	NUMBER OF CASES					
	1982	1983	1984	1985	1986	1987
Vaccine Preventable						
Measles	17	1	1	241	252	36
Mumps	63	97	203	127	209	196
Pertussis	27	32	27	49	78	41
Rubella	31	8	5	1	2	5
H Flu Meningitis Type B	50	63	56	98	117	90
Chickenpox[1]	182	2584	5827	5255	4980	9708
Central Nervous System						
Aseptic Meningitis	33	70	71	89	153	151
Bacterial Meningitis[2]	15	24	24	30	168	141
Meningococcal Meningitis	18	20	12	23	16	20
Viral Encephalitis	16	12	13	17	19	17
Enteric						
Amebiasis	35	31	50	40	69	41
Campylobacteriosis	343	539	566	565	587	577
Giardiasis	435	746	1432	1006	965	873
Salmonellosis (except typhoid)	404	498	353	416	454	479
Shigellosis	740	928	886	787	912	1187
Typhoid	8	19	3	3	9	4
Fungal						
Coccidioidomycosis	251	211	211	191	173	205
Hepatitis						
Hepatitis A	627	919	777	1239	1427	2044
Hepatitis B	269	365	486	719	890	857
Non-A Non-B Hepatitis[3]	63	101	138	237	188	134
Unspecified	267	198	151	171	151	83
Sexually Transmitted[4]						
Genital Herpes	1563	1226	853	998	1061	1395
Gonorrhea	8668	8477	7676	8485	8030	6552
Gonococcal PID[5]	372	346	335	453	464	281
Resistant Gonorrhea[6]	12	51	47	73	113	256
Syphilis(P&S)[7]	178	177	239	311	252	304
Syphilis - Total[8]	421	501	659	757	696	979
Chlamydia[9]	NA	NA	NA	NA	NA	2948
Tuberculosis						
Pulmonary TB	245	213	222	219	215	235
Total TB	300	264	273	271	261	277
Zoonotic						
Human Rabies	0	0	0	0	0	0
Animal Rabies	60	35	54	124	102	84
Malaria	13	8	11	12	15	18
Plague	5	10	2	0	1	2
Tularemia	1	1	4	4	1	3
Other						
Reyes Syndrome	1	1	4	4	3	1
Toxic Shock Syndrome	3	4	12	13	9	11

1 Chickenpox was not a notifiable disease prior to 1982.
2 Effective January 1, 1986, H. flu meningitis and meningococal meningitis were included in the total case count of bacterial meningitis.
3 Non-A Non-B Hepatitis became a notifiable disease in 1982.
4 STD data obtained from Centers for Disease Control.
5 PID is pelvic inflammatory disease.
6 Includes PPNG, penicillase producing Neisseria gonorrheae, a form of gonorrhea which destroys penicillin and CMRNG, chromosomally mediated resistant Neisseria gonorrhoeae, a form of gonorrhea which is resistant to penicillin.
7 Primary and secondary syphilis only.
8 Early, late, congenital and other.
9 Chlamydia reporting effective January 28, 1987

TABLE 5-2

FREQUENCY (N) AND RATES (R)[a] OF EARLY AND LATE SYPHILIS, GONORRHEA AND CHLAMYDIA BY GENDER, ARIZONA, 1987

	SYPHILIS				GONORRHEA				CHLAMYDIA	
	EARLY		LATE		PRS[b]		GC[c]			
GENDER	N	R	N	R	N	R	N	R	N	R
MALE	301	17.6	304	17.8	151	8.8	3,958	231.5	629	36.8
FEMALE	209	11.9	151	8.6	105	6.0	2,581	146.7	2,316	131.7
TOTAL	512[d]	14.8	456	13.1	256	7.4	6,552[e]	188.9	2,948[f]	85.0

a Rates per 100,000 population in 1987. Population estimates used to calculate rates are from Arizona Department of Economic Security, Population Statistics Unit.
b PRS = Penicillin resistant strains
c GC = Gonococcal
d Total includes two cases of unknown gender.
e Total includes 13 cases of unknown gender.
f Total includes three cases of unknown gender.

TABLE 5-3

FREQUENCY OF REPORTED CASES OF EARLY AND LATE SYPHILIS, GONORRHEA AND CHLAMYDIA BY AGE GROUP, ETHNICITY, AND COUNTY OF RESIDENCE, ARIZONA, 1987

AGE GROUP	SYPHILIS		GONORRHEA			CHLAMYDIA
	EARLY	LATE	PRS[a]	PID[b]	GC[c]	
0-9	1	0	0	0	61	66
10-19	71	16	52	89	1,576	908
20-29	243	107	154	142	3,484	1,614
30-39	127	141	36	45	1,103	277
40-49	43	89	10	5	249	47
50-59	17	47	4	0	45	19
60 +	10	55	0	0	34	17
TOTALS	512	455	256	281	6,552	2,948
ETHNICITY						
White[d]	131	53	88	124	1,844	1,065
Native American	110	54	5	28	873	654
Black	92	29	67	60	1,884	136
Asian	2	11	1	0	19	6
Hispanic	161	273	92	42	1,377	390
Other	16	35	3	27	555	698
TOTALS	512	455	256	281	6,552	2,948
COUNTY OF RESIDENCE						
Apache	7	16	0	5	322	240
Cochise	1	12	0	1	74	28
Coconino	9	3	0	8	201	204
Gila	9	6	0	2	36	110
Graham	4	2	0	0	12	20
Greenlee	0	0	0	0	5	3
La Paz	0	1	0	1	7	14
Maricopa	330	234	215	193	4,409	1,293
Mohave	3	0	0	7	51	23
Navajo	50	19	0	7	194	128
Pima	40	62	34	47	977	731
Pinal	12	17	1	8	81	16
Santa Cruz	5	9	2	1	19	1
Yavapai	2	4	0	0	31	64
Yuma	32	68	4	0	80	49
Out-of-State	8	2	0	1	53	24
TOTALS	512	455	256	281	6,552	2,948

a PRS = Penicillin resistant strains
b PID = Pelvic inflammatory disease
c GC = Gonococcal
d White non-Hispanics only.

TABLE 5-4

FREQUENCY DISTRIBUTION OF HIV INFECTION BY SUBCATEGORIES AND AGE GROUP, ARIZONA, 1981-1987

Age Group (Years)	AIDS	ARC	HIV Ab+	Total
Under 13	3	6	3	12
13-19	4	1	12	17
20-29	124	59	288	471
30-39	227	51	237	515
40-49	94	25	107	226
Over 49	52	10	37	99
Unknown	-	-	110	110
TOTAL	504	152	794	1,450

TABLE 5-5

GENDER DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND ANNUAL CASE FATALITY RATES, ARIZONA, 1981-82 TO 1987

	1981-82	1983	1984	1985	1986	1987	TOTAL
# Male Cases	5	7	23	83	144	215	477
# Female Cases	0	1	3	2	5	16	27
# Total Cases	5	8	26	85	149	231	504
# Deaths	5	6	24	68	80	95	286
Case Fatality Rate in %	100	75	92	80	59	41	57

TABLE 5-6

DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND COUNTY,[1] ARIZONA, 1981-82 TO 1987

County	1981-82	1983	1984	1985	1986	1987	TOTAL
Apache	0	0	0	0	0	2	2
Cochise	0	1	0	1	0	2	4
Coconino	0	0	0	0	1	0	1
Gila	0	0	1	0	0	1	2
Maricopa	3	6	18	61	111	177	376
Mohave	0	0	0	0	1	1	2
Navajo	0	0	0	0	0	1	1
Pima	1	1	4	23	30	42	101
Pinal	1	0	1	0	5	2	9
Yavapai	0	0	2	0	1	2	5
Yuma	0	0	0	0	0	1	1
TOTAL	5	8	26	85	149	231	504

1 County was listed only if at least one resident was diagnosed with AIDS by December 31, 1987.

TABLE 5-7

DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND TRANSMISSION CATEGORY, ARIZONA, 1981-82

Transmission	1981-82	1983	1984	1985	1986	1987	TOTAL
Gay/Bisexual Male	4	5	18	64	107	156	354
IV Drug Abuser	0	1	2	5	9	22	39
Gay and IV Drug Abuser	1	1	3	7	16	14	42
Adult Hemophiliac	0	0	1	2	4	6	13
Heterosexual Contact	0	0	0	0	3	9	12
Adult Transfusion	0	1	1	3	6	15	26
Adult Undetermined	0	0	1	4	3	7	15
Pediatric Hemophiliac	0	0	0	0	0	2	2
Pediatric Transfusion	0	0	0	0	1	0	1

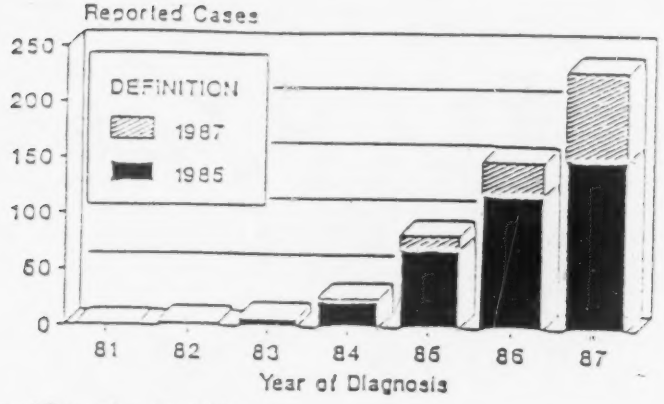
TABLE 5-8

DISTRIBUTION OF REPORTED AIDS CASES BY YEAR OF DIAGNOSIS AND ETHNIC GROUP AND RATES[1] FOR CUMULATIVE TOTAL, ARIZONA, 1981-82 TO 1987

Ethnicity	1981-82	1983	1984	1985	1986	1987	Total	Rate
White	3	7	22	76	130	193	431	21.2
Black	0	0	1	4	4	10	19	25.9
Hispanic	2	0	2	3	15	23	45	10.0
Asian	0	1	0	1	0	0	2	9.7
Native American	0	0	1	0	0	3	4	2.8
Unknown	0	0	0	1	0	2	3	-

1 Rates were calculated per 100,000 using the 1980 census because that was the latest year with population counts by ethnicity.

Figure 3
Arizona AIDS Cases
Surveillance Definition



As of December 31, 1988

Figure 4
ARIZONA AIDS BY CASE DEFINITION
For Race/Ethnicity as of December 31, 1987

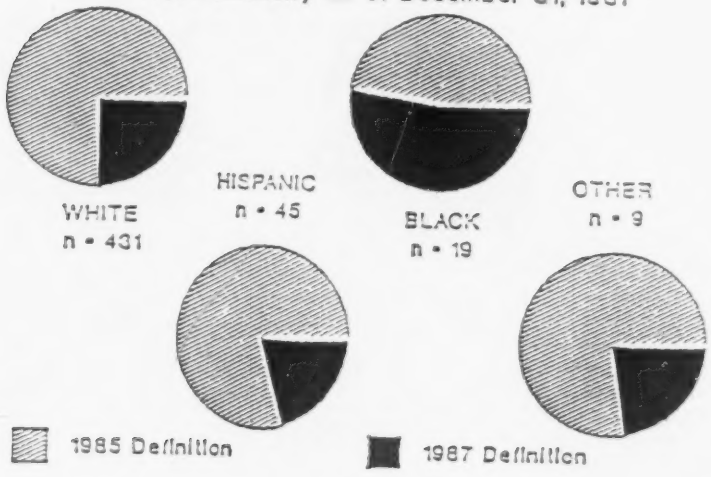
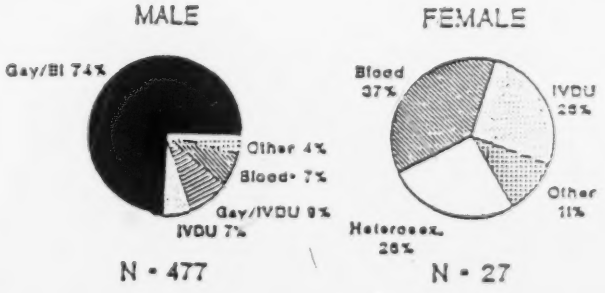


Figure 5
ARIZONA AIDS CASES
Proportion by Risk by Sex



To December 31, 1987
*Includes hemophiliacs

Figure 6

ARIZONA AIDS CASES: PERCENTAGE
BY RISK BEHAVIOR WITHIN RACE/ETHNICITY

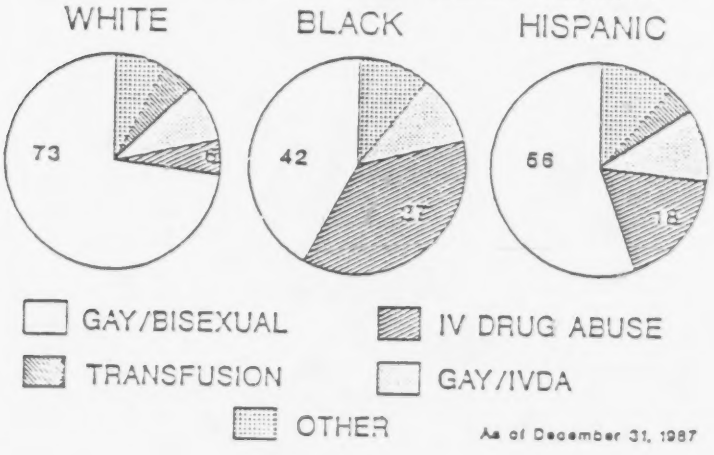
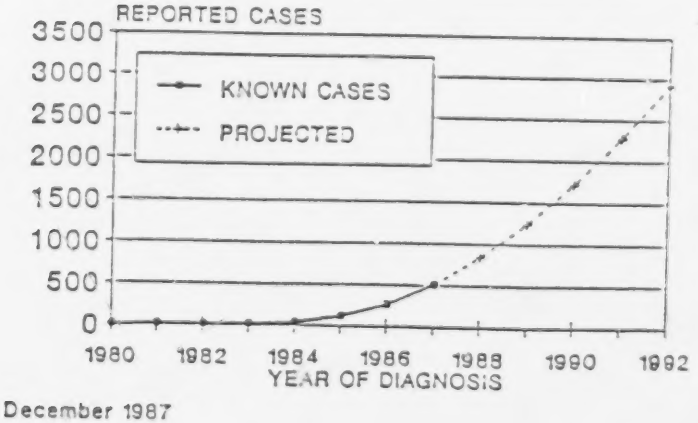


Figure 7

ARIZONA PROJECTED AIDS CASES
CUMULATIVE BY YEAR OF DIAGNOSIS



December 1987

SUMMARY OF STATUS: PROGRESS AND PROBLEMS

Two questions are used to summarize the data presented in the prior five sections. What progress has been made to date in improving the health status of Arizona residents? What problems appear evident in health status? Increases for three or more years in annual incidence rates of death or disease are viewed as signals of a problem. A problem also is judged to exist if the 1987 incidence rate of death or disease is the highest either of the six-year period examined in the report or of an even longer time period. Conversely, progress is indexed by a declining trend in annual incidence rates of death or disease of at least three years' duration or when the 1987 rate is the lowest of the six-year period. Results indicative of progress or problems are outlined below for four major areas: 1) Mothers and Infants; 2) Total Mortality and Chronic Diseases; 3) Sudden and/or Violent Death; and 4) Infectious Diseases. The results in each area are not listed in any priority order.

MOTHERS AND INFANTS

PROGRESS

1. The 1987 Arizona neonatal mortality rate of 5.9 deaths per 1,000 births is 9 percent better than the 1990 U. S. Public Health objective of 6.5.

2. The 1987 Arizona neonatal mortality rate remained lower than the U.S. rate despite a rise of 9.3 percent from 1986 to 1987.

PROBLEMS

1. The Arizona infant mortality rate has not improved since 1982, thus the 1987 rate was only 6 percent better than the U.S. rate not 17 percent better as it was in 1982.

2. The 1987 infant mortality rate due to low birthweight/short gestation was the highest of the decade.

3. Low birthweight/short gestation not SIDS was the leading single cause of infant death in 1987 for the first time in this decade.

4. The 1987 ratio of low birthweight babies was equal to the ratio seen twelve years ago in 1975.

5. Over 1,500 more babies were low birthweight in 1987 than 1975.

6. The 1987 birth rate of girls 15 to 19 years old was the highest of the 1981 to 1987 period.

7. The proportion of births to unwed women doubled from 13.6 percent in 1975 to 27.1 percent in 1987.

8. Over 17,000 babies were born to an unwed mother in 1987.

9. Nine percent of women giving birth in 1987 received less than five prenatal visits during pregnancy, the highest percent of the decade.

10. The percent of women giving birth who began prenatal care in the first trimester was lower in Arizona than the nation during the entire decade.

TOTAL MORTALITY AND CHRONIC DISEASES

PROGRESS

1. Arizonans were less likely to die of heart disease or cancer than their national counterparts throughout this decade.

2. The 1987 mortality rate from stroke was the lowest of the decade and was better than the U.S. rate as it was in the prior six years.

3. Arizona men in 1987 still had a lower death rate than men in the entire U.S., an advantage seen since 1970.

4. Arizonans' 1987 alcoholism death rate was the lowest of the decade.

5. Atherosclerosis in 1987 claimed the lives of Arizona men at the lowest rate since 1982.

6. The 1987 stroke death rate of women in Arizona was the lowest of the decade.

7. Girls' and urban children's death rates from congenital anomalies declined to a six-year low in 1987.

PROBLEMS

1. The annual increases in cancer mortality since 1981 continued, making the 1987 cancer death rate the highest of the decade.

2. The 1987 Arizona death rate from chronic obstructive pulmonary disease (COPD) exceeded the U.S. rate by 42 percent, continuing the pattern seen throughout the decade.

3. The COPD death rate for Arizona women in 1987 was the highest of the decade, after annual increases since 1983.

4. The 1987 cancer death rate of rural young adults was 77 percent greater than the 1980 rate and the highest of the decade.

5. The 1987 total mortality rates for adolescent boys and young adults of both genders in rural Arizona were the highest of the past six years.

6. The 1987 heart disease death rate of young adult women was the highest of the past six years.

7. The 1987 cancer death rate of young adult men was the highest of the decade.

8. The 1987 survival chances of boys, girls, urban and rural children were the best of the decade.

9. Elderly women died of heart disease at the lowest rate of the decade.

8. The 1987 greater death rates of rural than urban residents from one to 64 years of age repeated a decade-long difference. Almost 500 rural residents would not have died prematurely in 1987 if they had the same chances to live as urban residents.

9. The 1987 COPD death rate of rural middle-aged adults was the highest of the decade.

10. The 1987 death rate of elderly males from pneumonia/influenza was still above 212 as it has been since 1984.

11. The rural elderly in 1987 died from cancer at the highest rate of the decade.

12. In 1987 as in 1986 the cancer death rate was higher for rural than urban elderly, reversing the difference of the prior six years.

SUDDEN AND/OR VIOLENT DEATH

PROGRESS

1. Arizona women in 1987 died from such unintentional injuries as falls, fires and drownings at the lowest rate of the decade.

2. Arizona children in 1987 died from all types of unintentional injuries at the lowest rate of the decade.

3. Arizona children were murdered at the lowest rate of the decade in 1987.

4. The 1987 unintentional injury death rate of female adolescents was the lowest of the decade, primarily due to a reduction in motor vehicle inflicted injuries.

PROBLEMS

1. The 1987 suicide death rate was the highest in Arizona's history and exceeded the U.S. rate by 65 percent.

2. The Arizona 1987 unintentional injury death rate continued to exceed the U.S. rate by at least 16 percent as it has thoughout the decade.

3. The 1987 unintentional injury death rates for Apache and Navajo counties were still at least two times higher than the state rate as they were in the prior seven years.

4. The 1987 suicide death rates of adolescent girls, adolescent boys and rural adolescents were the highest in the state's history.

5. The homicide death rate of female adolescents was the lowest of the past six years in 1987.

6. The 1987 motor vehicle fatality rate of urban adolescents was the lowest of the decade.

7. Rural adolescents were murdered at the lowest rate of the past six years in 1987.

8. Male middle-aged adults died from unintentional injuries at the lowest rate of the decade in 1987.

5. The 1987 death rate of adolescent boys due to such unintentional injuries as falls, drownings and drug poisonings or overdoses was the highest of the past six years.

6. The 1987 death rate of rural adolescents due to unintentional injuries was higher than the death rate of urban adolescents from all causes.

7. The 1987 suicide death rates of young adult males and rural young adults were the highest of the decade.

8. In 1987, rural young adults died from motor vehicle inflicted injuries at the highest rate of the decade.

9. Both motor vehicle and other types of unintentional injuries killed middle-aged females at the highest rates of the decade.

10. Motor vehicle fatalities occurred among urban middle-aged adults at the highest rate of the past six years in 1987.

11. In 1987, urban young adults died from such unintentional injuries as falls, drownings and drug poisonings or overdoses at the highest rate of the decade.

INFECTIOUS DISEASES

PROGRESS

1. For the first time since 1980, the incidence of reported Hepatitis did not increase from 1986 to 1987.

2. The incidence of reported campylobacteriosis has been stable since 1983.

3. No Arizonan was reported with rabies in 1987, making it the seventh consecutive year with no human rabies reported.

PROBLEMS

1. The 1987 incidence rate of reported shigellosis was the highest of of the past six years.

2. The 1987 incidence rate of reported Hepatitis A was the highest of the past six years.

3. Reported cases of penicillin resistant strains of gonorrhea were at an all-time high in 1987.

4. Reflecting better differential diagnosis, the 1987 incidence of unspecified Hepatitis reported was the lowest of the decade.

5. The 1987 incidence of reported gonorrhea was the lowest of the past six years.

6. The 1987 incidence rate of gonorrhea was 32 percent lower than the 1990 objective of the U.S. Public Health Service.

7. The 1987 incidence of reported cases of gonococcal pelvic inflammatory disease was the lowest of the past six years.

4. Annual incidences of syphilis among females steadily increased since 1983.

5. The 321 AIDS cases diagnosed and reported in 1987 represented a 55 percent increase over the 1986 cases. Change in the case definition of AIDS in 1987 accounted for 28 percent of the increase in reported cases.

6. HIV seropositivity was reported in 794 persons in 1987, the first year results of the blood test were reported.

7. Two cases of AIDS were diagnosed and reported among children under 13 years old in 1987.

8. It is expected that 2,920 AIDS cases will be diagnosed in Arizona by the end of 1992.

9. 1987 was the third consecutive year in which the incidence of reported genital herpes increased.

PART II: VITAL STATISTICS

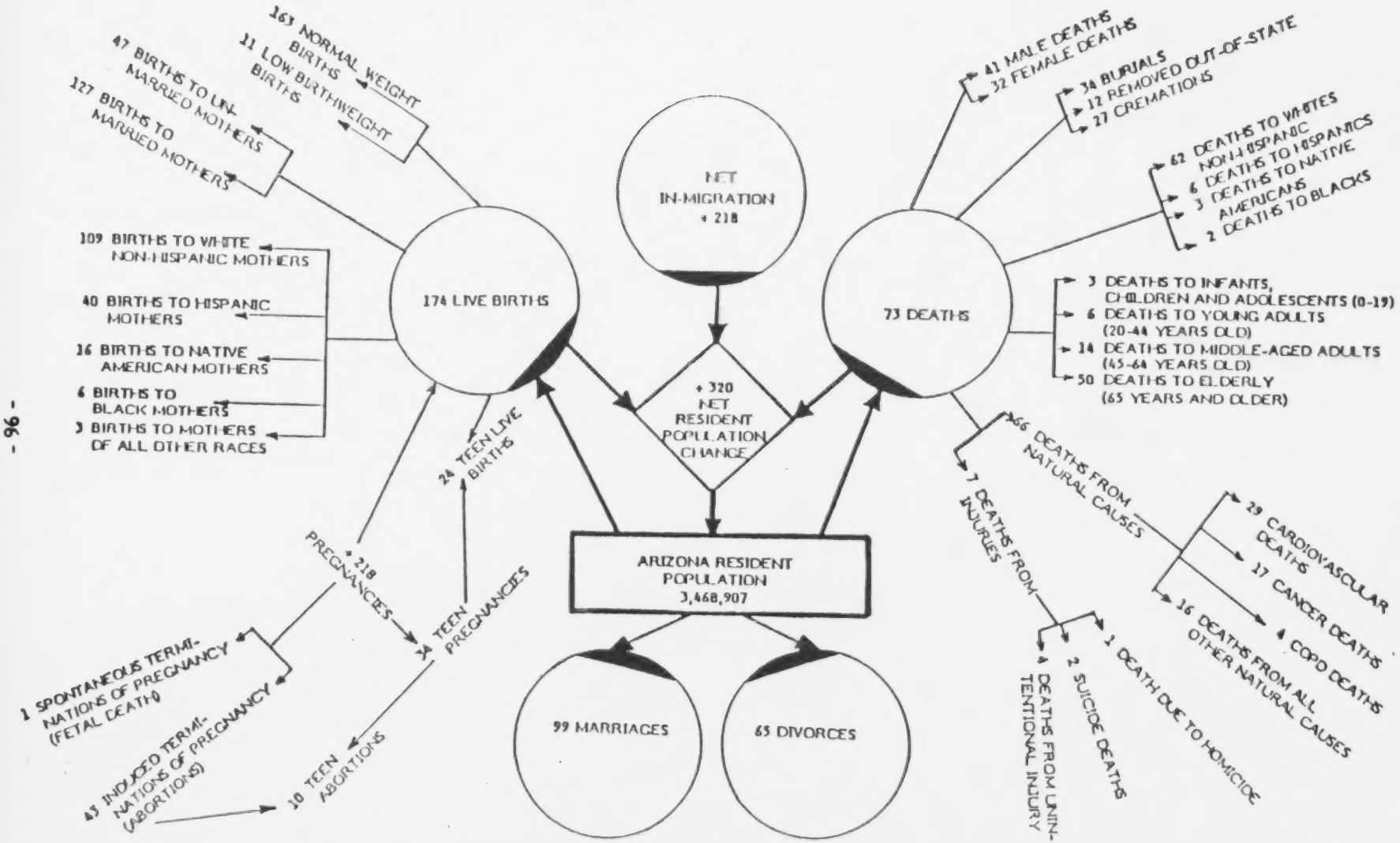

163 NORMAL WEIGHT BIRTHS
31 LOW BIRTHWEIGHT BIRTHS
47 BIRTHS TO UNMARRIED MOTHERS
127 BIRTHS TO MARRIED MOTHERS
109 BIRTHS TO WHITE NON-HISPANIC MOTHERS
40 BIRTHS TO HISPANIC MOTHERS
16 BIRTHS TO NATIVE AMERICAN MOTHERS
6 BIRTHS TO BLACK MOTHERS
3 BIRTHS TO MOTHERS OF ALL OTHER RACES
174 LIVE BIRTHS
NET IN-MIGRATION + 218
+ 320 NET RESIDENT POPULATION CHANGE
ARIZONA RESIDENT POPULATION 3,468,907
24 TEEN LIVE BIRTHS
+ 218 PREGNANCIES
TEEN PREGNANCIES
1 SPONTANEOUS TERMINATIONS OF PREGNANCY (FETAL DEATH)
43 INDUCED TERMINATIONS OF PREGNANCY (ABORTIONS)
10 TEEN ABORTIONS
99 MARRIAGES
65 DIVORCES
73 DEATHS
41 MALE DEATHS
32 FEMALE DEATHS
34 BURIALS
12 REMOVED OUT-OF-STATE
27 CREMATIONS
62 DEATHS TO WHITES NON-HISPANIC
6 DEATHS TO HISPANICS
3 DEATHS TO NATIVE AMERICANS
2 DEATHS TO BLACKS
3 DEATHS TO INFANTS, CHILDREN AND ADOLESCENTS (0-19)
6 DEATHS TO YOUNG ADULTS (20-44 YEARS OLD)
14 DEATHS TO MIDDLE-AGED ADULTS (45-64 YEARS OLD)
50 DEATHS TO ELDERLY (65 YEARS AND OLDER)
66 DEATHS FROM NATURAL CAUSES
29 CARDIOVASCULAR DEATHS
17 CANCER DEATHS
4 COPD DEATHS
16 DEATHS FROM ALL OTHER NATURAL CAUSES
7 DEATHS FROM INJURIES
4 DEATHS FROM UNINTENTIONAL INJURY
2 SUICIDE DEATHS
1 DEATH DUE TO HOMICIDE

FIGURE 8. AVERAGE DAILY VITAL EVENTS, ARIZONA, 1987

POPULATION STATISTICS

TABLE 6-1

ESTIMATED POPULATION BY COUNTY OF RESIDENCE,
ARIZONA, 1982 - 1987

COUNTY	1982	1983	1984	1985	1986	1987
ARIZONA	2,895,791	2,975,627	3,080,284	3,197,804	3,351,880	3,468,907
Apache	53,412	54,366	55,482	56,357	60,499	62,399
Cochise	89,690	90,745	93,358	96,293	97,603	100,267
Coconino	78,498	80,165	83,388	85,973	88,951	91,869
Gila	39,037	39,230	38,502	38,104	39,700	40,127
Graham	23,852	23,925	23,237	23,330	24,533	24,694
Greenlee	11,809	11,042	9,999	8,683	9,576	9,630
La Paz	13,181	13,628	14,066	14,391	14,100	14,150
Maricopa	1,614,584	1,663,748	1,731,141	1,800,033	1,911,612	1,990,840
Mohave	61,588	63,996	68,653	72,593	77,371	79,288
Navajo	69,567	69,842	71,242	72,324	73,973	75,686
Pima	565,143	582,078	603,330	624,347	642,991	659,112
Pinal	97,058	98,491	99,751	100,150	103,795	107,169
Santa Cruz	21,920	22,271	21,730	27,111	27,547	29,183
Yavapai	75,489	78,398	78,622	88,000	91,697	95,036
Yuma	80,964	83,703	87,783	90,116	87,932	89,457

Source: Arizona Department of Economic Security, Population Statistics Unit

TABLE 6-2

ESTIMATED POPULATION BY AGE AND GENDER, AND COUNTY OF RESIDENCE, ARIZONA, 1987

COUNTY		All ages	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65+
ARIZONA*	T	3,468,907	315,402	522,577	520,407	630,053	465,458	308,906	285,030	421,074
	M	1,710,063	161,314	265,327	259,820	319,329	234,996	153,093	135,702	180,482
	F	1,758,844	154,088	257,250	260,587	310,724	230,462	155,813	149,328	240,592
Apache	T	62,385	9,860	14,403	11,141	8,940	6,519	4,492	3,287	3,713
	M	30,580	5,060	7,313	5,612	4,159	3,115	2,157	1,508	1,656
	F	31,805	4,830	7,090	5,529	4,781	3,404	2,335	1,779	2,057
Cochise	T	100,254	8,282	15,973	16,708	16,257	12,853	9,502	8,754	11,925
	M	49,658	4,237	8,096	8,408	8,286	6,422	4,691	4,174	5,344
	F	50,596	4,045	7,877	8,300	7,971	6,431	4,811	4,580	6,581
Coconino	T	91,856	9,798	15,916	14,302	22,348	12,071	7,233	5,330	4,858
	M	45,761	5,012	8,137	7,029	10,981	6,237	3,610	2,574	2,181
	F	46,095	4,786	7,779	7,273	11,367	5,834	3,623	2,756	2,677
Gila	T	40,117	3,306	6,822	5,821	5,283	4,869	3,672	3,668	3,926
	M	19,415	1,687	3,386	2,849	2,534	2,415	1,807	1,832	2,905
	F	20,702	1,619	3,436	2,972	2,749	2,454	1,865	2,094	3,513
Graham	T	24,683	2,108	4,697	3,893	3,919	3,049	2,218	1,946	2,853
	M	12,430	1,073	2,342	1,850	2,131	1,711	1,107	945	1,291
	F	12,233	1,035	2,335	2,043	1,788	1,338	1,111	1,001	1,562
Greenlee	T	9,616	801	2,067	1,584	1,356	1,280	826	913	789
	M	4,660	410	1,019	777	648	651	379	441	335
	F	4,956	391	1,048	807	708	629	447	472	454
La Paz	T	14,140	1,170	2,372	1,878	2,007	1,555	1,254	1,375	2,529
	M	7,029	598	1,213	933	991	760	616	690	1,228
	F	7,111	572	1,159	945	1,016	795	638	685	1,301
Maricopa	T	1,990,838	181,920	290,925	298,862	366,975	275,148	180,036	160,167	236,805
	M	985,773	93,061	148,753	150,820	187,770	139,417	89,882	76,545	99,525
	F	1,005,065	88,859	142,172	148,042	179,205	135,731	90,154	83,622	137,280
Mohave	T	79,279	5,760	10,917	11,496	11,818	9,223	7,052	8,587	14,426
	M	39,265	2,949	5,619	5,724	5,807	4,587	3,502	4,083	6,994
	F	40,014	2,811	5,298	5,772	6,011	4,636	3,550	4,504	7,432
Navajo	T	75,676	9,596	16,511	13,789	10,749	8,923	6,320	4,557	5,231
	M	32,588	4,904	7,123	5,486	4,275	3,732	2,682	2,070	2,286
	F	43,118	4,692	9,388	8,303	6,474	5,191	3,638	2,487	2,945
Pima	T	659,102	52,268	90,746	95,311	130,410	91,463	58,526	56,625	82,753
	M	322,986	27,223	46,266	47,690	65,425	46,514	28,882	26,607	34,369
	F	336,116	26,035	44,480	47,621	64,985	44,949	29,644	30,018	48,384
Pinal	T	107,159	10,342	18,099	16,770	16,802	13,057	9,264	9,266	13,559
	M	54,245	5,292	9,236	8,483	8,857	6,909	4,697	4,522	6,249
	F	52,914	5,050	8,863	8,287	7,945	6,148	4,567	4,744	7,310
Santa Cruz	T	29,171	3,234	5,579	5,002	4,224	3,517	2,552	2,343	2,720
	M	14,060	1,656	2,830	2,518	2,008	1,657	1,207	1,041	1,143
	F	15,111	1,578	2,749	2,484	2,216	1,860	1,345	1,302	1,577
Yavapai	T	95,024	6,425	12,674	11,830	13,848	11,291	8,492	10,249	20,215
	M	46,551	3,287	6,490	5,836	7,099	5,663	4,134	4,841	9,201
	F	48,473	3,138	6,184	5,994	6,749	5,628	4,358	5,408	11,014
Yuma	T	89,446	9,487	14,850	11,967	15,104	10,614	7,479	7,677	12,268
	M	44,989	4,848	7,492	5,777	8,351	5,193	3,745	3,813	5,768
	F	44,457	4,639	7,358	6,190	6,753	5,421	3,734	3,862	6,500

* County estimates may not total to Arizona population due to rounding.

Source: Based on estimates prepared by the Arizona Department of Economic Security, Population Statistics Unit, 12/12/86.

TABLE 6-3

ESTIMATED POPULATION BY AGE AND GENDER IN URBAN AND RURAL AREAS,*
ARIZONA, 1987

Area and Gender	Under 1	1-14	15-19	20-44	45-64	65+	TOTAL
URBAN	48,232	568,627	184,829	1,073,340	455,354	319,558	2,649,940
Male	24,599	290,714	92,790	544,846	221,916	133,894	1,308,759
Female	23,633	277,913	92,039	528,494	233,438	185,664	1,341,181
RURAL	16,389	204,731	64,392	293,357	138,582	101,516	818,967
Male	8,360	102,968	31,510	144,999	66,879	46,588	401,304
Female	8,029	101,763	32,882	148,358	71,703	54,928	417,663
TOTAL	64,621	773,358	249,221	1,366,697	593,936	421,074	3,468,907
Male	32,959	393,682	124,300	689,845	288,795	180,482	1,710,063
Female	31,662	379,676	124,921	676,852	305,141	240,592	1,758,844

* Maricopa and Pima counties comprise Arizona's urban areas while the remaining 13 counties represent rural areas.
Source: based on data published by Population Statistics Unit in the Arizona Department of Economic Security (12/12/86).

BIRTH STATISTICS

TABLE 7-1

RATES OF NATURAL INCREASE FROM BIRTHS PER 1,000 POPULATION, BY COUNTY OF RESIDENCE, ARIZONA AND UNITED STATES, 1982-1987

AREA	1982	1983	1984	1985	1986	1987	Percent Change 1986-1987
Apache	27.4	26.2	29.0	27.1	23.5	24.2	+ 3.0
Cochise	10.1	9.4	10.4	9.1	8.8	8.4	- 4.5
Coconino	17.1	18.3	17.9	18.2	16.2	17.5	+ 8.0
Gila	10.3	7.6	7.2	6.8	5.7	4.0	- 29.8
Graham	12.7	10.4	11.3	10.2	8.4	10.2	+ 21.4
Greenlee	13.9	10.3	11.3	13.1	5.8	5.9	+ 1.7
Maricopa	10.2	10.0	10.0	11.2	11.1	11.0	- 0.1
Mohave	4.8	5.6	5.9	2.9	3.5	3.7	+ 5.7
Navajo	21.0	20.9	20.3	19.8	19.1	20.1	+ 5.2
Pima	8.6	8.8	8.1	8.7	8.3	7.6	- 8.4
Pinal	12.7	11.2	10.5	12.7	10.7	11.2	+ 4.7
Santa Cruz	16.2	14.4	16.1	13.8	13.0	13.3	+ 2.3
Yavapai	2.6	0.9	0.4	0.4	1.1	- 0.5	- 145.5
Yuma	12.2	13.0	13.5	13.8	14.8	14.4	- 2.7
La Paz	NA	6.5	3.0	6.9	6.2	3.3	- 46.8
ARIZONA	10.6	10.3	10.1	10.9	10.6	10.6	0.0
U.S.[a]	7.4	6.9	6.9	7.1	6.8	7.0	+ 2.9

[a] U.S. data from the National Center for Health Statistics. Rates for 1982-1985 are final. Rates for 1986 and 1987 are provisional.

TABLE 7-2

BIRTHS BY COUNTY OF RESIDENCE
ARIZONA, 1950-87

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	20,510	36,655	37,591	39,543	50,049	51,620	52,628	52,919	55,109	59,344	60,822	63,320
Apache	761	1,479	1,369	1,434	1,627	1,681	1,845	1,787	1,817	1,853	1,757	1,852
Cochise	765	1,651	1,352	1,505	1,570	1,646	1,555	1,565	1,618	1,559	1,524	1,606
Coconino	768	1,452	1,407	1,477	1,824	1,733	1,768	1,808	1,813	1,946	1,828	2,006
Gila	717	744	693	666	705	760	810	683	672	642	625	569
Graham	385	334	371	424	512	509	468	435	446	406	395	445
Greenlee	440	255	232	297	272	299	256	185	195	161	106	124
La Paz	NA	NA	NA	NA	NA	NA	NA	236	195	234	215	198
Maricopa	8,805	17,789	19,695	19,987	26,769	27,800	28,598	28,758	30,711	33,780	35,334	36,624
Mohave	230	184	465	545	871	886	886	926	988	968	1,065	1,177
Navajo	895	1,443	1,484	1,631	1,899	1,816	1,883	1,911	1,864	1,895	1,896	1,981
Pima	3,862	7,131	6,735	7,264	8,931	9,130	9,155	9,585	9,678	10,278	10,423	10,924
Pinal	1,407	1,943	1,555	1,712	1,840	1,899	1,945	1,869	1,849	2,049	2,053	2,126
Santa Cruz	250	345	297	361	499	519	491	457	512	523	504	547
Yavapai	492	630	543	631	937	998	1,067	1,032	999	1,088	1,129	1,171
Yuma	733	1,275	1,393	1,609	1,793	1,944	1,901	1,682	1,752	1,962	1,968	1,970

TABLE 7-3

BIRTHS BY COUNTY OF OCCURRENCE,*
ARIZONA, 1950 - 1987

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	20,728	36,499	37,455	39,436	50,068	51,604	52,368	52,544	54,889	59,305	60,775	63,347
Apache	906	1,539	1,245	1,066	1,237	1,228	1,318	1,259	1,419	1,663	1,641	1,776
Cochise	790	1,573	1,382	1,477	1,511	1,618	1,500	1,453	1,513	1,474	1,420	1,484
Coconino	633	1,440	1,360	1,689	2,263	2,114	2,239	2,207	2,188	2,264	2,163	2,349
Gila	659	684	687	569	576	613	668	560	570	538	510	438
Graham	400	297	315	384	397	407	376	360	374	412	400	474
Greenlee	402	249	240	291	309	306	256	173	178	89	8	5
La Paz	NA	NA	NA	NA	NA	NA	NA	3	4	2	5	1
Maricopa	8,934	18,016	20,015	20,722	28,076	29,194	30,038	30,314	32,191	35,410	36,902	38,457
Mohave	242	145	289	489	861	876	834	858	909	975	1,029	1,084
Navajo	891	1,163	1,229	1,157	1,183	1,107	1,158	1,243	1,210	1,155	1,080	1,136
Pima	3,902	7,174	6,923	7,838	9,906	10,208	10,111	10,307	10,415	11,036	11,161	11,745
Pinal	1,464	1,944	1,396	1,175	920	905	902	850	873	973	1,025	879
Santa Cruz	271	442	327	358	310	316	253	282	344	326	361	437
Yavapai	510	628	538	581	846	926	1,002	952	925	1,009	1,051	1,079
Yuma	724	1,205	1,509	1,640	1,673	1,786	1,713	1,723	1,776	1,979	2,019	2,003

* Resident (62,420) and non-resident (927) births occurring in Arizona.

TABLE 7-4

RESIDENT BIRTHS BY MONTH OF OCCURRENCE
ARIZONA, 1975-87

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	3,324	3,008	3,255	3,149	3,147	3,073	3,446	3,507	3,574	3,471	3,128	3,461	39,543
Percent	8.4	7.6	8.2	8.0	8.0	7.8	8.7	8.9	9.0	8.8	7.9	8.8	100.0
1976	3,346	3,071	3,297	3,063	3,206	3,137	3,426	3,569	3,669	3,382	3,328	3,534	40,028
Percent	8.4	7.7	8.2	7.7	8.0	7.8	8.6	8.9	9.2	8.4	8.3	8.8	100.0
1977	3,456	3,233	3,547	3,277	3,398	3,314	3,492	3,802	3,667	3,605	3,450	3,586	41,827
Percent	8.3	7.7	8.5	7.8	8.1	7.9	8.3	9.1	8.8	8.6	8.2	8.6	100.0
1978	3,563	3,251	3,506	3,173	3,414	3,309	3,695	3,999	3,878	3,789	3,721	3,760	43,058
Percent	8.3	7.6	8.1	7.4	7.9	7.7	8.6	9.3	9.0	8.8	8.6	8.7	100.0
1979	3,693	3,381	3,829	3,485	3,632	3,678	4,036	4,288	4,179	4,086	4,088	4,174	46,549
Percent	7.9	7.3	8.2	7.5	7.8	7.9	8.7	9.2	9.0	8.8	8.8	9.0	100.0
1980	4,006	3,748	4,069	3,822	4,039	3,982	4,497	4,369	4,707	4,414	4,060	4,336	50,049
Percent	8.0	7.5	8.1	7.6	8.1	8.0	9.0	8.7	9.4	8.8	8.1	8.7	100.0
1981	4,139	3,868	4,311	3,934	3,990	4,325	4,533	4,662	4,537	4,647	4,264	4,410	51,620
Percent	8.0	7.5	8.4	7.6	7.7	8.4	8.8	9.0	8.8	9.0	8.3	8.5	100.0
1982	4,252	3,925	4,355	4,160	4,107	4,280	4,608	4,691	4,798	4,634	4,300	4,518	52,628
Percent	8.1	7.5	8.3	7.9	7.8	8.8	8.8	8.9	9.1	8.8	8.2	8.6	100.0
1983	4,420	4,016	4,532	4,291	4,181	4,195	4,545	4,866	4,721	4,529	4,230	4,393	52,919
Percent	8.4	7.6	8.6	8.1	7.9	7.9	8.6	9.2	8.9	8.6	8.0	8.3	100.0
1984	4,397	4,209	4,456	4,244	4,331	4,368	4,954	4,979	5,013	4,842	4,693	4,623	55,109
Percent	8.0	7.6	8.1	7.7	7.9	7.9	9.0	9.0	9.1	8.8	8.6	8.3	100.0
1985	4,841	4,435	4,814	4,460	4,820	4,693	5,231	5,476	5,228	5,196	4,994	5,156	59,344
Percent	8.2	7.5	8.1	7.5	8.1	7.9	8.8	9.2	8.8	8.8	8.4	8.7	100.0
1986	4,915	4,572	4,947	4,696	4,799	4,935	5,452	5,489	5,552	5,367	4,800	5,298	60,822
Percent	8.1	7.5	8.1	7.7	7.9	8.1	9.0	9.0	9.1	8.8	7.9	8.7	100.0
1987	5,108	4,831	5,243	5,034	5,006	5,136	5,647	5,599	5,562	5,442	5,179	5,533	63,320
Percent	8.1	7.6	8.3	8.0	7.9	8.1	8.9	8.8	8.8	8.6	8.2	8.7	100.0

FSC:08BRS7-4

TABLE 7-5

BIRTHS BY MONTH AND DAY OF OCCURRENCE, ARIZONA RESIDENTS, 1987

Day of Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
01	143	139	137	154	171	183	190	150	207	200	126	189
02	164	162	187	187	129	191	189	152	206	199	186	174
03	157	192	170	205	121	201	168	193	197	163	202	214
04	140	180	178	133	193	196	164	196	179	121	197	191
05	176	196	182	131	181	161	115	194	149	158	198	158
06	181	176	172	188	160	142	194	198	160	209	183	155
07	161	155	150	204	185	118	213	195	152	178	140	169
08	184	126	117	164	194	196	187	161	190	203	113	187
09	163	167	176	150	143	167	172	162	208	189	181	183
10	134	189	212	197	134	162	189	176	195	141	207	202
11	126	178	173	137	179	188	156	213	202	128	163	208
12	177	203	209	128	214	192	157	183	190	170	197	150
13	169	169	104	181	189	156	156	206	180	209	184	145
14	168	142	145	187	165	122	210	197	160	182	143	179
15	180	146	140	188	168	191	188	169	167	200	165	192
16	180	163	192	182	143	186	179	133	196	196	179	188
17	146	184	177	165	113	189	203	199	176	161	204	222
18	119	185	166	142	169	177	161	211	204	147	176	198
19	170	160	170	128	187	182	154	202	166	200	209	171
20	158	201	197	164	176	152	180	203	158	214	202	143
21	178	166	146	176	161	127	188	189	222	179	140	175
22	184	145	131	181	178	188	207	158	242	171	158	183
23	180	178	172	185	135	196	205	150	187	175	187	208
24	143	211	192	188	110	188	207	198	211	133	208	156
25	140	183	170	138	129	173	183	198	205	152	180	127
26	169	186	207	139	170	190	162	167	154	176	140	140
27	196	176	166	174	168	164	172	178	130	189	171	144
28	179	173	138	186	179	127	190	195	192	137	143	173
29	198	-	130	173	181	162	192	165	201	195	120	224
30	183	-	166	179	161	169	207	131	176	204	177	201
31	156	-	191	-	120	-	209	177	-	143	-	184
TOTAL	5,108	4,831	5,243	5,034	5,006	5,136	5,647	5,599	5,562	5,442	5,179	5,533

TABLE 7-6

BIRTHS TO ARIZONA RESIDENTS OCCURRING IN ARIZONA
BY COUNTY AND MONTH, ARIZONA 1987

County of Occurrence	TOTAL	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
ARIZONA	62,420	5,047	4,765	5,176	4,954	4,940	5,077	5,542	5,491	5,504	5,377	5,103	5,444
Apache	1,510	120	107	124	126	116	127	134	134	138	135	118	131
Cochise	1,591	127	128	137	119	142	122	138	154	141	131	136	116
Coconino	1,961	151	161	161	160	172	177	177	155	169	153	163	162
Gila	568	39	42	50	51	46	56	66	45	45	38	45	45
Graham	444	39	35	34	37	31	35	38	39	40	34	46	36
Greenlee	124	10	8	12	17	10	9	2	10	17	9	11	9
La Paz	104	15	5	14	8	10	8	14	10	5	9	4	2
Maricopa	36,541	2,975	2,810	2,985	2,868	2,874	2,953	6,231	3,275	3,186	3,155	2,978	3,251
Mohave	990	76	67	93	83	87	80	87	89	88	99	70	71
Navajo	1,885	141	136	154	155	145	163	155	160	176	178	155	167
Pima	10,911	879	805	935	893	878	862	999	910	984	946	888	932
Pinal	2,119	174	163	179	134	153	215	210	186	188	167	169	181
Santa Cruz	544	50	37	45	45	47	42	37	41	45	59	50	46
Yavapai	1,169	92	96	102	93	92	82	88	105	110	106	105	98
Yuma	1,959	159	165	151	165	137	146	166	178	172	158	165	197

* 900 births to Arizona residents occurred out-of-state.

TABLE 7-7

BIRTHS BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE
ARIZONA, 1987

County of Residence	All Ages	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Not Stated
ARIZONA	63,320	142	3,200	5,433	19,334	19,712	11,206	3,736	534	22	1
Apache	1,852	7	109	163	563	464	371	146	29	-	-
Cochise	1,606	2	79	147	532	499	230	99	17	1	-
Coconino	2,006	3	107	166	586	624	365	133	22	-	-
Gila	569	6	29	74	175	160	83	33	8	1	-
Graham	445	2	34	47	149	110	71	26	5	1	-
Greenlee	124	-	10	18	33	34	18	10	1	-	-
La Paz	198	-	20	18	58	59	25	18	-	-	-
Maricopa	36,624	70	1,765	3,016	11,039	11,750	6,600	2,082	295	7	-
Mohave	1,177	1	56	110	380	374	187	53	13	3	-
Navajo	1,981	12	120	182	634	539	331	136	24	2	1
Pima	10,924	22	472	884	3,285	3,483	2,009	687	75	7	-
Pinal	2,126	10	195	240	698	561	309	98	15	-	-
Santa Cruz	547	2	35	44	148	142	126	43	7	-	-
Yavapai	1,171	3	58	107	363	356	195	80	9	-	-
Yuma	1,970	2	111	217	691	557	286	92	14	-	-

TABLE 7-8

RESIDENT BIRTHS BY MOTHER'S RACE AND AGE GROUP
ARIZONA, 1984-87

Year	Race*	Total	-15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Not Stated
1984											
	White	47,250	67	6,028	16,005	14,599	7,889	2,312	335	15	-
	Native American	5,265	27	1,014	1,871	1,263	734	282	68	5	1
	Black	1,911	16	432	743	466	191	58	5	-	-
	Asian	683	-	39	153	254	166	59	12	-	-
	Total	55,109	110	7,513	18,772	16,582	8,980	2,711	420	20	1
1985											
	White	51,034	67	6,486	16,874	15,834	8,743	2,624	391	12	3
	Native American	5,478	25	980	1,916	1,321	805	349	78	3	1
	Black	1,969	15	417	753	488	203	86	7	-	-
	Asian	863	3	33	178	336	239	67	7	-	-
	Total	59,344	110	7,916	19,721	17,979	9,990	3,126	483	15	4
1986											
	White	52,088	98	6,666	16,536	16,331	9,172	2,854	414	15	2
	Native American	5,718	42	1,044	2,012	1,369	839	344	65	2	1
	Black	2,157	12	469	777	541	268	83	7	-	-
	Asian	859	-	45	180	321	226	76	10	-	-
	Total	60,822	152	8,224	19,505	18,562	10,505	3,357	497	17	3
1987											
	White	54,018	83	7,023	16,329	17,223	9,744	3,160	435	20	1
	Native American	6,036	37	1,061	2,005	1,528	943	389	72	1	-
	Black	2,289	22	495	772	624	273	86	16	1	-
	Asian	923	-	48	208	316	243	98	10	-	-
	Other	54	-	6	20	21	3	3	1	-	-
	Total	63,320	142	8,633	19,334	19,712	11,206	3,736	534	22	1

* Each race includes births to mothers who indicated Hispanic origin on certificate, compare Table 7-9.

TABLE 7-9

RESIDENT LIVE BIRTHS BY MOTHER'S ETHNICITY AND AGE GROUP, ARIZONA, 1987

Age	All Ethnic Groups	White[a]	Non-White[b]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	142	83	59	56	86	83	51	32	22	1	21	37	4	33	0	0	0
15-17	3,200	2,505	695	1,188	2,012	2,505	1,137	1,368	211	12	199	464	37	427	20	2	18
18-19	5,433	4,518	915	1,740	3,693	4,518	1,698	2,820	284	3	281	597	37	560	34	2	32
20-24	19,334	16,329	3,005	5,031	14,303	16,329	4,941	11,388	772	12	760	2,005	69	1,936	228	9	219
25-29	19,712	17,223	2,489	3,953	15,759	17,223	3,877	13,346	624	9	615	1,528	49	1,479	337	18	319
30-34	11,206	9,744	1,462	1,936	9,270	9,744	1,910	7,834	273	2	271	943	21	922	246	3	243
35-39	3,736	3,160	576	673	3,063	3,160	665	2,495	86	3	83	389	4	385	101	1	100
40-44	534	435	99	117	417	435	116	319	16	1	15	72	0	72	11	0	11
45+	22	20	2	7	15	20	7	13	1	0	1	1	0	1	0	0	0
Unknown	1	1	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0
TOTAL	63,320	54,018	9,302	14,701	48,619	54,018	14,402	39,616	2,289	43	2,246	6,036	221	5,815	977	35	942

a Includes Whites of Hispanic origin
b Includes Non-Whites of Hispanic origin

Note: In previous years, Hispanics as an ethnic category have been restricted to White Hispanics

TABLE 7-10

BIRTHS BY MOTHER'S COUNTY OF RESIDENCE AND EDUCATION
ARIZONA, 1987

County of Residence	Total	YEARS OF EDUCATION None	1-8	9-12	13-16	17+	Not Stated
ARIZONA	63,320	108	4,180	36,494	19,217	2,599	722
Percent	**100.0**	**0.2**	**6.6**	**57.6**	**30.3**	**4.1**	**1.1**
Apache	1,852	3	128	1,269	386	19	47
Cochise	1,606	-	104	924	456	41	81
Coconino	2,006	9	82	1,238	600	68	9
Gila	569	-	17	421	119	8	4
Graham	445	-	33	286	119	3	4
Greenlee	124	-	6	89	25	3	1
La Paz	198	-	10	72	18	3	95
Maricopa	36,624	65	2,512	19,948	12,143	1,627	329
Mohave	1,177	-	34	852	222	26	43
Navajo	1,981	16	93	1,408	398	31	35
Pima	10,924	7	521	6,253	3,471	641	31
Pinal	2,126	5	211	1,458	397	32	23
Santa Cruz	547	1	70	365	96	11	4
Yavapai	1,171	-	40	723	355	50	3
Yuma	1,970	2	319	1,188	412	36	13

TABLE 7-11

BIRTHS BY COUNTY OF RESIDENCE OF MOTHER, RACE* AND SEX OF CHILD
ARIZONA, 1987

County of Residence	Total Births			White			Non-White			Black			Native American			Other		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	63,320	32,382	30,938	53,506	27,414	26,092	9,814	4,968	4,846	2,887	1,472	1,415	5,973	3,010	2,963	954	486	468
Apache	1,852	942	910	284	144	140	1,568	798	770	6	5	1	1,560	792	768	2	1	1
Cochise	1,606	840	766	1,378	731	647	228	109	119	160	78	82	14	8	6	54	23	31
Coconino	2,006	1,078	928	1,019	568	451	987	510	477	43	25	18	931	477	454	13	8	5
Gila	569	271	298	382	176	206	187	95	92	-	-	-	186	94	92	1	1	-
Graham	445	220	225	373	180	193	72	40	32	7	5	2	61	32	29	4	3	1
Greenlee	124	67	57	120	64	56	4	3	1	1	1	-	2	2	-	1	-	1
La Paz	198	103	95	144	77	67	54	26	28	-	-	-	49	25	24	5	1	4
Maricopa	36,624	18,751	17,873	33,101	16,957	16,144	3,523	1,794	1,729	1,916	987	929	976	488	488	631	319	312
Mohave	1,177	586	591	1,106	551	555	71	35	36	5	3	2	58	27	31	8	5	3
Navajo	1,981	994	987	671	342	329	1,310	652	658	16	8	8	1,292	642	650	2	2	-
Pima	10,924	5,605	5,319	9,743	5,005	4,738	1,181	600	581	528	262	266	449	229	220	204	109	95
Pinal	2,126	1,076	1,050	1,682	864	818	444	212	232	108	49	59	332	162	170	4	1	3
Santa Cruz	547	276	271	540	276	264	7	-	7	5	-	5	-	-	-	2	-	2
Yavapai	1,171	579	592	1,136	563	573	35	16	19	5	2	3	29	14	15	1	-	1
Yuma	1,970	994	976	1,827	916	911	143	78	65	87	47	40	34	18	16	22	13	9

* Each race includes births of infants whose either one or both parents are of Hispanic origin, compare Table 7-12.

TABLE 7-12

HISPANIC* BIRTHS BY COUNTY OF RESIDENCE OF MOTHER, RACE AND SEX OF CHILD
ARIZONA, 1987

County of Residence	Total Births			White			Non-White			Black			Native American			Other		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	17,609	8,977	8,632	16,646	8,494	8,152	963	483	480	259	131	128	637	321	316	67	31	36
Apache	87	39	48	70	33	37	17	6	11	1	1	-	11	5	6	-	-	-
Cochise	587	304	283	566	291	275	21	13	8	16	10	6	1	-	1	4	3	1
Coconino	240	126	114	210	111	99	30	15	15	4	3	1	24	12	12	2	-	2
Gila	141	58	83	130	54	76	11	4	7	-	-	-	11	4	7	-	-	-
Graham	164	78	86	156	73	83	8	5	3	2	1	1	6	4	2	-	-	-
Greenlee	63	32	31	63	32	31	-	-	-	-	-	-	-	-	-	-	-	-
La Paz	61	30	31	50	26	24	11	4	7	-	-	-	9	4	5	2	-	2
Maricopa	9,239	4,766	4,473	8,833	4,546	4,287	406	220	186	95	56	39	280	150	130	31	14	17
Mohave	107	61	46	97	54	43	10	7	3	1	1	-	7	4	3	2	2	-
Navajo	174	77	97	136	57	79	38	20	18	3	2	1	35	18	17	-	-	-
Pima	4,208	2,139	2,069	3,947	2,018	1,929	261	121	140	95	42	53	151	73	78	15	6	9
Pinal	838	432	406	731	383	348	107	49	58	20	7	13	85	41	44	2	1	1
Santa Cruz	473	246	227	469	246	223	4	-	4	3	-	3	-	-	-	1	-	1
Yavapai	152	78	74	145	75	70	7	3	4	2	1	1	5	2	3	-	-	-
Yuma	1,080	511	569	1,043	495	548	37	16	21	17	7	10	12	4	8	8	5	3

* Either one or both parents are of Hispanic origin.

TABLE 7-13

LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE OF MOTHER AND RACE* OF CHILD, ARIZONA, 1987

County of Residence	Total LBW Births	White	Non-White	Black	Native American	Other
ARIZONA	4,107	3,360	747	342	334	71
Apache	120	22	98	-	98	-
Cochise	109	92	17	13	3	1
Coconino	115	78	37	6	30	1
Gila	32	20	12	-	12	-
Graham	15	13	2	-	2	-
Greenlee	7	7	-	-	-	-
La Paz	10	9	1	-	-	1
Maricopa	2,412	2,077	335	228	55	52
Mohave	81	77	4	-	4	-
Navajo	135	44	91	4	87	-
Pima	695	594	101	65	22	14
Pinal	145	107	38	17	20	1
Santa Cruz	36	34	2	2	-	-
Yavapai	79	78	1	-	1	-
Yuma	116	108	8	7	-	1

* Each race includes low-birthweight births of infants whose either one or both parents are of Hispanic origin. Compare Tables 7-14, 7-17 and 7-18.

TABLE 7-14

HISPANIC* LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE OF MOTHER AND RACE OF CHILD ARIZONA, 1987

County of Residence	Total LBW Births	White	Non-White	Black	Native American	Other
ARIZONA	1,117	1,049	68	26	36	6
Apache	6	6	-	-	-	-
Cochise	37	34	3	3	-	-
Coconino	24	20	4	-	3	1
Gila	14	13	1	-	1	-
Graham	7	7	-	-	-	-
Greenlee	4	4	-	-	-	-
La Paz	3	2	1	-	-	1
Maricopa	564	540	24	7	15	2
Mohave	9	8	1	-	1	-
Navajo	13	7	6	1	5	-
Pima	284	268	16	8	7	1
Pinal	48	39	9	5	4	-
Santa Cruz	35	33	2	2	-	-
Yavapai	10	10	-	-	-	-
Yuma	59	58	1	-	-	1

* Either one or both parents are of Hispanic origin.

TABLE 7-15

LOW-BIRTHWEIGHT BIRTHS BY COUNTY OF RESIDENCE
ARIZONA, 1970-1987

County of Residence	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	2,773	2,563	3,089	3,103	3,076	3,204	3,377	3,712	3,785	4,107
Apache	102	93	98	109	117	111	109	137	129	120
Cochise	113	131	114	122	111	141	125	104	87	109
Coconino	125	102	112	112	96	120	113	132	113	115
Gila	37	46	38	34	54	31	41	36	50	32
Graham	38	29	28	43	22	20	13	29	29	15
Greenlee	17	17	14	15	11	10	10	7	4	7
La Paz	NA	NA	NA	NA	NA	25	10	16	18	10
Maricopa	1,446	1,293	1,628	1,664	1,655	1,695	1,927	2,095	2,232	2,412
Mohave	26	40	58	47	72	52	66	52	73	81
Navajo	121	123	118	121	95	102	107	109	111	135
Pima	487	433	559	549	511	592	562	650	607	695
Pinal	109	116	124	120	141	114	103	137	138	145
Santa Cruz	19	18	33	21	32	24	16	46	35	36
Yavapai	31	33	57	50	66	73	72	69	62	79
Yuma	102	89	108	96	93	94	103	93	97	116

TABLE 7-16

LOW-BIRTHWEIGHT BIRTHS BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE
ARIZONA, 1987

County of Residence	Total Births All Weights	Total Low-Birthweight Births	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+
ARIZONA	63,320	4,107	13	731	1,198	1,181	700	241	42	1
Apache	1,852	120	1	16	34	34	25	8	2	-
Cochise	1,606	109	-	19	34	34	15	7	-	-
Coconino	2,006	115	-	23	30	31	22	6	3	-
Gila	569	32	2	7	7	10	5	1	-	-
Graham	445	15	-	2	5	6	1	1	-	-
Greenlee	124	7	-	3	-	2	1	1	-	-
La Paz	198	10	-	3	1	2	2	2	-	-
Maricopa	36,624	2,412	7	399	696	712	433	136	28	1
Mohave	1,177	81	-	18	26	24	10	3	-	-
Navajo	1,981	135	1	34	32	31	24	12	1	-
Pima	10,924	695	2	113	225	197	108	43	7	-
Pinal	2,126	145	-	38	37	41	19	10	-	-
Santa Cruz	547	36	-	11	12	6	5	2	-	-
Yavapai	1,171	79	-	10	26	24	13	5	1	-
Yuma	1,970	116	-	35	33	27	17	4	-	-

TABLE 7-17

LOW-BIRTHWEIGHT BIRTHS BY MOTHER'S ETHNICITY AND AGE GROUP,
ARIZONA, 1987

Age	All Ethnic Groups	White[a]	Non-White[b]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	13	8	5	4	9	8	4	4	3	0	3	2	0	2	0	0	0
15-17	278	217	61	92	186	217	91	126	30	1	29	29	0	29	2	0	2
18-19	453	374	79	140	313	374	138	236	37	0	37	38	2	36	4	0	4
20-24	1,198	995	203	284	914	995	279	716	87	0	87	104	5	99	12	0	12
25-29	1,181	992	189	223	958	992	218	774	82	2	80	81	1	80	26	2	24
30-34	700	577	123	112	588	577	108	469	47	0	47	58	3	55	18	1	17
35-39	241	205	36	37	204	205	37	168	8	0	8	21	0	21	7	0	7
40-44	42	32	10	11	31	32	11	21	3	0	3	5	0	5	2	0	2
45+	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
TOTAL	4,107	3,401	706	904	3,203	3,401	887	2,514	297	3	294	338	11	327	71	3	68

[a] Includes Whites of Hispanic origin
[b] Includes Non-Whites of Hispanic origin

Note: In previous years, Hispanics as an ethnic category have been restricted to White Hispanics

TABLE 7-18

BIRTH RATIOS[a] OF LOW-BIRTHWEIGHT BABIES BY MOTHER'S ETHNICITY AND AGE GROUP, ARIZONA, 1987

Age	All Ethnic Groups	White[b]	Non-White[c]	Hispanic All Races	Non Hispanic All Races	WHITE			BLACK			NATIVE AMERICAN			OTHER		
						All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic	All	Hispanic	Non-Hispanic
< 15	9.2	9.6	8.5	7.1	10.5	9.6	7.8	12.5	13.6	-	14.3	5.4	-	6.1	-	-	-
15-17	8.7	8.7	8.8	7.7	9.2	8.7	8.5	9.2	14.2	8.3	14.6	6.3	-	6.8	10.0	-	11.1
18-19	8.3	8.3	8.6	4.5	8.5	8.3	8.1	8.4	13.0	-	13.2	6.4	5.4	6.4	11.8	-	12.5
20-24	6.2	6.1	6.8	5.6	6.4	6.1	5.6	6.3	11.3	-	11.4	5.2	7.2	5.1	5.3	-	5.5
25-29	6.0	5.8	7.6	5.6	6.1	5.8	5.6	5.8	13.1	**	13.0	5.3	2.0	5.4	7.7	11.1	7.5
30-34	6.2	5.9	8.4	5.8	6.3	5.9	5.7	6.0	17.2	-	17.3	6.2	14.3	6.0	7.3	**	7.0
35-39	6.5	6.5	6.3	5.5	6.7	6.5	5.6	6.7	9.3	-	9.6	5.4	-	5.5	6.9	-	7.0
40-44	7.9	7.4	10.1	9.4	7.4	7.4	9.5	6.6	18.8	-	20.0	6.9	-	6.9	18.2	-	18.2
45+	4.5	5.0	-	**	-	5.0	**	-	-	-	-	-	-	-	-	-	-
TOTAL	6.5	6.3	7.6	6.1	6.6	6.3	6.2	6.3	13.0	7.0	13.1	5.6	5.0	5.6	7.3	8.9	7.2

[a] Low-birthweight births ratios per 100 live births in corresponding group and calculated only if at least ten live births recorded in 1987
[b] Includes Whites of Hispanic origin
[c] Includes Non-Whites of Hispanic origin
- No low-birthweight births recorded in 1987
** Fewer than ten live births

Note: In previous years, Hispanics as an ethnic category have been restricted to White Hispanics

TABLE 7-19

DISTRIBUTION OF LOW-BIRTHWEIGHT BIRTHS AND LBW RISK* BY AMOUNT OF PRENATAL CARE AND COUNTY OF RESIDENCE, ARIZONA, 1987

County of Residence	Distribution of LBW births by number of prenatal visits						Percent distribution of LBW births by number of prenatal visits**						Birth ratios of LBW babies by number of prenatal visits				
	All amounts	None	1-4	5-8	9+	Unknown	All amounts	None	1-4	5-8	9+	Unknown	All amounts	None	1-4	5-8	9+
ARIZONA	4,107	216	513	957	2,287	134	100.0	5.3	12.5	23.3	55.7	3.3	6.5	14.8	12.2	8.6	5.0
Apache	120	8	26	36	47	3	100.0	6.7	21.7	30.0	39.2	2.5	6.5	14.0	12.2	7.6	4.3
Cochise	109	2	11	19	72	5	100.0	1.8	10.1	17.4	66.1	4.6	6.8	11.8	10.6	6.4	6.2
Coconino	115	10	10	31	63	1	100.0	8.7	8.7	27.0	54.8	0.8	5.7	14.1	4.7	7.0	4.9
Gila	32	1	5	8	14	4	100.0	3.1	15.6	25.0	43.8	12.5	5.6	14.3	11.1	4.7	4.2
Graham	15	1	5	5	4	-	100.0	6.7	33.3	33.3	26.7	-	3.4	14.3	9.8	5.4	1.4
Greenlee	7	-	2	3	2	-	100.0	-	28.6	42.9	28.6	-	5.6	-	8.7	6.7	3.6
La Paz	10	-	2	1	3	4	100.0	-	20.0	10.0	30.0	40.0	5.1	-	11.8	3.1	6.0
Maricopa	2,412	109	238	544	1,430	91	100.0	4.5	9.9	22.6	59.3	3.8	6.6	18.0	13.5	10.5	5.1
Mohave	81	7	21	23	27	3	100.0	8.6	25.9	28.4	33.3	3.7	6.9	18.9	14.4	6.4	4.7
Navajo	135	18	19	33	59	6	100.0	13.3	14.1	24.4	43.7	4.4	6.8	21.7	7.1	6.1	5.6
Pima	695	42	126	162	362	3	100.0	6.0	18.1	23.3	52.1	0.5	6.4	12.7	13.2	7.0	5.0
Pinal	145	4	26	32	78	5	100.0	2.8	17.9	22.1	53.8	3.4	6.8	9.5	11.6	6.3	5.9
Santa Cruz	36	4	5	13	14	-	100.0	11.1	13.9	36.1	38.9	-	6.6	18.2	8.9	9.4	4.2
Yavapai	79	2	12	21	40	4	100.0	2.5	15.2	26.6	50.6	5.1	6.7	22.2	22.2	12.4	4.3
Yuma	116	8	5	26	72	5	100.0	6.9	4.3	22.4	62.1	4.3	5.9	4.9	6.6	7.9	5.2

* Low-birthweight babies as a percent of all live birth in specific category.

** Percent distribution may not total due to rounding.

TABLE 7-20

BIRTHS BY PERIOD OF GESTATION, NUMBER OF PRENATAL VISITS AND BIRTHWEIGHT, ARIZONA, 1987

Period of Gestation	All amounts of prenatal* visits			NUMBER OF PRENATAL VISITS: None			1-4 Visits			5-8 Visits			9+ Visits		
	All births	All LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births	All births	LBW births	% LBW births
20-27 weeks	407	294	72.2	33	28	84.8	107	80	74.8	143	108	75.5	111	68	61.3
28-31 weeks	698	420	60.2	41	22	53.6	108	62	57.4	202	121	59.9	325	203	62.5
32-35 weeks	3,786	1,225	32.4	136	42	30.9	447	154	34.5	883	287	32.5	2,248	723	32.2
36 weeks	3,110	422	13.6	95	12	12.6	268	38	14.2	616	97	15.7	2,086	269	12.9
37-39 weeks	29,576	978	3.3	532	33	6.2	1,741	90	5.2	4,985	183	3.7	21,987	655	3.0
40 weeks	10,969	170	1.5	172	8	4.7	518	12	2.3	1,694	43	2.5	8,482	101	1.2
41 weeks	6,106	121	2.0	108	18	16.7	347	9	2.6	967	22	2.3	4,625	70	1.5
42-45 weeks	5,280	110	2.1	105	1	1.0	326	13	4.0	942	26	2.8	3,836	69	1.8
Other or not stated	3,388	367	10.8	237	52	21.9	350	55	15.7	664	70	10.5	1,753	130	7.4
TOTAL	63,320	4,107	6.5	1,459	216	14.8	4,212	513	12.2	11,096	957	8.6	45,453	2,287	5.0

* Includes records with unknown or unspecified number of prenatal visits.

TABLE 7-21

SINGLE AND PLURAL RESIDENT LIVE BIRTHS BY BIRTHWEIGHT, ARIZONA, 1980-1987

Birthweight in grams	1980	1981	1982	1983	1984	1985	1986	1987
Under 1000, total	222	213	203	217	244	289	313	360
Single	181	178	169	165	206	235	255	273
Plural	51	35	34	52	38	54	58	87
1001-1500, total	232	256	223	297	283	323	368	374
Single	181	211	189	231	225	253	303	291
Plural	51	45	34	66	58	70	65	83
1501-2000, total	588	579	605	617	603	692	648	700
Single	461	445	501	480	482	556	514	545
Plural	127	134	104	137	121	136	134	155
2001-2500, total	2,047	2,055	2,045	2,073	2,247	2,408	2,456	2,673
Single	1,804	1,799	1,804	1,804	1,980	2,084	2,089	2,279
Plural	243	256	241	269	267	324	367	394
2501-4000, total	41,954	43,820	44,328	44,385	46,155	49,720	51,033	52,784
Single	11,501	42,847	43,891	43,872	45,663	49,241	50,476	52,181
Plural	453	473	437	513	492	479	557	603
4001 and over, total	4,954	5,156	5,188	5,279	5,538	5,863	5,958	6,396
Single	4,951	5,155	5,188	5,275	5,536	5,861	5,956	6,391
Plural	3	1	-	4	2	2	2	5
All weights, total*	50,049	51,620	52,628	52,919	55,109	59,344	60,822	63,320
Single	49,113	50,670	51,777	5 878	54,131	58,775	59,637	61,989
Plural	936	950	851	,041	978	1,069	1,185	1,331

* Includes records with unspecified birthweight.

TABLE 7-22

FREQUENCY DISTRIBUTION OF BIRTHS BY AMOUNT OF PRENATAL VISITS AND COUNTY OF RESIDENCE, ARIZONA, 1987

County	Total	None	1-4	5-8	9+	Unknown
ARIZONA	63,320	1,459	4,212	11,096	45,453	1,100
Apache	1,852	57	213	473	1,088	21
Cochise	1,606	17	104	298	1,161	26
Coconino	2,006	71	212	440	1,278	5
Gila	569	7	45	172	334	11
Graham	445	7	51	92	289	6
Greenlee	124	-	23	45	56	-
La Paz	198	6	17	32	50	93
Maricopa	36,624	607	1,767	5,185	28,299	766
Mohave	1,177	37	146	359	574	61
Navajo	1,981	83	268	544	1,059	27
Pima	10,924	330	955	2,305	7,304	30
Pinal	2,126	42	225	511	1,319	29
Santa Cruz	547	22	56	139	330	-
Yavapai	1,171	9	54	170	930	8
Yuma	1,970	164	76	331	1,382	17

TABLE 7-23

FREQUENCY DISTRIBUTION OF BIRTHS BY MOTHER'S AGE GROUP AND RACE AND TRIMESTER OF PREGNANCY PRENATAL CARE BEGAN, ARIZONA, 1987

Trimester of pregnancy prenatal care began by race	ALL AGES	UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40+
ALL RACES*	63,320	142	3,200	5,433	19,334	19,712	11,206	3,736	557
1st trimester	43,525	55	1,561	2,761	12,380	14,775	8,758	2,848	387
2nd trimester	12,950	48	1,044	1,710	4,411	3,313	1,714	597	113
3rd trimester	4,247	23	370	615	1,558	1,005	459	180	37
No prenatal care	1,381	9	133	191	548	297	134	57	12
Not stated	1,217	7	92	156	437	322	141	54	8
WHITE**	39,616	32	1,368	2,820	11,388	13,346	7,834	2,495	333
1st trimester	30,102	18	699	1,572	8,039	10,827	6,608	2,064	275
2nd trimester	6,676	9	450	855	2,268	1,805	935	313	41
3rd trimester	1,905	3	150	269	710	472	208	79	14
No prenatal care	475	-	44	67	192	116	37	17	2
Not stated	458	2	25	57	179	126	46	22	1
HISPANIC***	14,402	51	1,137	1,698	4,941	3,877	1,910	665	123
1st trimester	8,276	20	548	780	2,739	2,470	1,214	441	64
2nd trimester	3,665	15	372	534	1,255	871	441	136	41
3rd trimester	1,443	10	130	247	532	315	144	56	9
No prenatal care	580	3	51	81	241	116	65	20	3
Not stated	438	3	36	56	174	105	46	12	6
BLACK	2,289	22	211	284	772	624	273	86	17
1st trimester	1,396	7	102	144	449	426	204	59	5
2nd trimester	541	6	71	83	190	125	40	17	9
3rd trimester	190	4	16	29	80	42	13	5	2
No prenatal care	65	3	12	8	22	9	6	3	1
Not stated	97	2	10	20	31	22	10	2	-
NATIVE AMERICAN	6,036	37	464	597	2,005	1,528	943	389	73
1st trimester	3,042	10	205	252	1,000	801	531	207	36
2nd trimester	1,906	18	145	226	650	461	271	116	19
3rd trimester	645	6	71	66	219	157	81	33	12
No prenatal care	249	3	24	34	91	52	24	16	5
Not stated	194	-	19	19	45	57	36	17	1
OTHER RACE	977	-	20	34	228	337	246	101	11
1st trimester	709	-	7	13	153	251	201	77	7
2nd trimester	162	-	6	2	48	51	27	15	3
3rd trimester	64	-	3	4	17	19	13	7	1
No prenatal care	12	-	2	1	2	4	2	1	-
Not stated	30	-	2	4	8	12	3	1	-

* Includes records with unknown or unspecified race

** Non-Hispanic

*** For the purpose of this classification Hispanics are white of Hispanic origin who contributed to 98 percent of all Hispanic births in Arizona in 1987.

TABLE 7-24

FREQUENCY DISTRIBUTION OF BIRTHS BY MOTHER'S AGE GROUP AND RACE AND NUMBER OF PREVIOUS LIVE BIRTHS, ARIZONA, 1987

Number of previous live births by race	ALL AGES	UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40+
ALL RACES*	63,320	142	3,200	5,433	19,334	19,712	11,206	3,736	556
None	24,414	135	2,790	3,797	8,505	5,965	2,539	624	59
1	19,422	6	361	1,318	6,704	6,615	3,417	895	106
2	10,920	-	-	256	2,977	4,265	2,480	819	85
3	4,737	-	-	48	825	1,851	1,406	525	75
4 or more	3 731	-	-	8	299	991	1,338	868	226
WHITE**	39,616	32	1,368	2,820	11,388	13,346	7,834	2,495	333
None	16,436	32	1,241	2,134	5,662	4,685	2,115	521	46
1	12,868	-	117	599	3,897	4,737	2,721	713	84
2	6,353	-	9	73	1,409	2,626	1,632	550	54
3	2,347	-	1	8	327	925	742	297	47
4 or more	1,554	-	-	3	13	14	19	4	5
HISPANIC***	14,402	51	1,137	1,698	4,941	3,877	1,910	665	123
None	5,053	48	967	1,102	1,825	798	247	57	9
1	4,025	3	143	448	1,726	1,184	406	104	11
2	2,828	-	20	120	969	1,004	536	157	22
3	1,378	-	5	25	283	547	372	129	17
4 or more	1,104	-	-	2	134	341	345	218	64
BLACK	2,289	22	211	284	772	624	273	86	17
None	775	20	169	159	249	125	39	14	-
1	708	2	37	92	281	207	71	14	4
2	422	-	4	25	152	163	56	22	-
3	208	-	-	5	60	80	44	17	2
4 or more	168	-	-	2	28	46	62	19	11
NATIVE AMERICAN	6,036	37	464	597	2,005	1,528	943	389	73
None	1,698	35	395	374	631	186	59	15	3
1	1,511	1	62	175	730	379	128	33	3
2	1,187	-	5	36	430	436	212	63	5
3	758	-	1	10	154	287	230	68	8
4 or more	872	-	-	1	57	237	314	209	54
OTHER RACE	977	-	20	34	228	337	246	101	11
None	452	-	18	28	138	171	79	17	1
1	310	-	2	4	70	108	91	31	4
2	130	-	-	2	17	36	44	27	4
3	46	-	-	-	1	12	18	14	1
4 or more	33	-	-	-	-	8	12	12	1

* Includes records with unknown or unspecified race. Totals for each race include records with unspecified number of previous live births.

** Non-Hispanic

*** For the purpose of this classification Hispanics are white of Hispanic origin who contributed to 98 percent of all Hispanic births in Arizona in 1987.

TABLE 7-25

NUMBER OF BIRTHS TO UNWED MOTHERS AND BIRTHS RATIOS* BY RACE,**
ARIZONA, 1970-1987

Year	All Live Births					Live Births to Unwed Mothers					Ratios* of Birth to Unwed Mothers			
	All Ethnic Groups	White	Black	Native American	Other Race	All Ethnic Groups	White	Black	Native American	Other Race	All Ethnic Groups	White	Black	Native American	Other Race
1970	37,591	32,150	1,378	3,851	212	4,064	2,537	518	1,003	6	10.8	7.9	37.6	26.0	2.8
1971	38,521	32,938	1,408	3,935	240	4,258	2,648	582	1,025	3	11.1	8.0	41.3	26.1	1.3
1972	37,501	31,925	1,399	3,921	256	4,313	2,582	605	1,124	2	11.5	8.1	43.2	28.7	0.8
1973	38,025	32,389	1,425	3,900	311	4,516	2,784	591	1,134	7	11.9	8.6	41.5	29.1	2.3
1974	39,906	34,200	1,389	3,912	405	5,043	3,162	606	1,272	3	12.6	9.3	43.6	32.5	0.7
1975	39,543	33,868	1,309	3,987	379	5,385	3,414	575	1,391	5	13.6	10.0	43.9	34.9	1.3
1976	40,028	34,129	1,300	4,181	418	5,720	3,592	583	1,537	8	14.3	10.5	44.9	36.8	1.9
1977	41,827	35,948	1,254	4,173	452	6,243	4,025	583	1,621	14	14.9	11.2	46.5	38.8	3.1
1978	43,058	36,839	1,458	4,331	430	7,045	4,590	707	1,737	11	16.4	12.5	48.5	40.1	2.6
1979	46,549	39,420	1,971	4,583	575	8,097	5,125	946	1,990	36	17.4	13.0	48.0	43.4	6.3
1980	50,049	43,092	1,634	4,796	527	9,373	6,307	832	2,213	21	18.7	14.6	50.9	46.1	4.0
1981	51,620	44,391	1,759	4,878	592	10,009	6,573	1,071	2,324	41	19.4	14.8	60.9	47.6	6.9
1982	52,628	45,049	1,800	5,137	642	10,798	7,337	940	2,489	32	20.5	16.3	52.2	48.5	5.0
1983	52,919	45,141	1,820	5,297	661	11,704	7,999	954	2,711	40	22.1	17.7	52.4	51.2	6.1
1984	55,109	47,250	1,911	5,265	683	12,832	8,999	1,048	2,736	49	23.3	19.0	54.8	52.0	7.2
1985	59,344	51,034	1,969	5,478	863	14,158	10,172	1,080	2,842	64	23.9	19.9	54.9	51.9	7.4
1986	60,822	52,088	2,157	5,718	859	15,600	11,168	1,'86	3,158	88	25.6	21.4	55.0	55.2	10.2
1987	63,320	54,018	2,289	6,036	977	17,161	12,369	1,307	3,389	96	27.1	22.9	57.1	56.1	9.8

* Ratio per 100 births in specific group.

** Each race includes births to unwed mothers who indicated Hispanic origin on certificate.

TABLE 7-26

BIRTHS TO UNWED MOTHERS BY MOTHER'S COUNTY OF RESIDENCE AND AGE GROUP
Arizona, 1987

County Residence	ALL AGES									
	Number	Ratio*	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40 +
ARIZONA	17,161		134	2,478	3,077	6,115	3,358	1,427	489	83
Ratio*		**27.1**	**94.4**	**77.4**	**56.8**	**31.6**	**17.0**	**12.7**	**13.1**	**14.9**
Apache	915	49.4	7	99	124	314	194	123	47	7
Cochise	348	21.7	2	44	67	125	74	24	10	2
Coconino	694	34.6	3	97	122	244	145	54	28	1
Gila	207	36.4	5	23	42	69	42	19	6	1
Graham	137	30.8	1	25	24	52	19	11	3	2
Greenlee	30	24.2	-	8	8	6	4	3	-	1
La Paz	24	12.1	-	7	3	9	4	1	-	-
Maricopa	9,232	25.2	68	1,409	1,723	3,305	1,763	684	237	43
Mohave	272	23.1	1	34	44	88	71	31	2	1
Navajo	809	40.8	12	94	135	299	162	78	22	7
Pima	2,865	26.2	20	351	507	1,056	571	267	84	9
Pinal	830	39.0	10	150	131	292	157	59	26	5
Santa Cruz	122	22.3	2	27	19	31	17	21	4	1
Yavapai	234	20.0	1	37	43	77	42	22	10	2
Yuma	442	22.4	2	73	85	148	93	30	10	1

* Number of births to unmarried women per 100 live births in specified group.

TABLE 7-27

BIRTHS TO UNWED MOTHERS BY MOTHER'S COUNTY OF RESIDENCE, RACE AND EDUCATION
ARIZONA, 1987

County of Residence	ETHNIC GROUP					EDUCATION				
	Total	White	Native American	Black	Other	Elementary*	High School	College	Advanced Degree	Not Stated
ARIZONA	17,161	12,369	3,389	1,307	96	1,994	12,543	2,249	110	265
Ratio**	27.1	22.9	56.1	57.1	9.8	46.5	34.4	11.7	4.2	36.7
Apache	915	52	863	-	-	64	676	146	2	27
Cochise	348	307	5	31	5	41	233	49	3	22
Coconino	694	184	492	17	1	43	530	113	4	4
Gila	207	105	102	-	-	10	175	18	-	4
Graham	137	95	34	5	3	15	103	16	1	2
Greenlee	30	29	-	1	-	1	26	3	-	-
La Paz	24	22	2	-	-	2	19	2	-	1
Maricopa	9,232	7,611	581	975	65	1,244	6,503	1,249	62	154
Mohave	272	250	20	-	2	7	233	29	1	2
Navajo	809	112	694	2	1	53	652	83	2	19
Pima	2,865	2,315	343	192	15	257	2,173	389	30	16
Pinal	830	550	217	61	2	118	625	74	1	12
Santa Cruz	122	120	-	1	1	21	92	9	-	-
Yavapai	234	217	15	2	-	15	185	32	1	1
Yuma	442	400	21	20	1	83	318	37	3	1

* Eight grades or less

** Number of births to unmarried women per 100 live births in specified group.

TABLE 7-28
NUMBER OF BIRTHS AND RATIOS* OF BIRTH TO
UNWED MOTHERS BY AGE GROUP AND RACE**

MOTHER'S AGE GROUP	NUMBER OF BIRTHS TO UNWED MOTHERS					RATIOS OF BIRTHS TO UNWED MOTHERS				
	WHITE	BLACK	NATIVE AMERICAN	OTHER	TOTAL	WHITE	BLACK	NATIVE AMERICAN	OTHER	TOTAL
Under 15	77	21	36	0	134	92.8	95.5	97.3	-	94.4
15-19	4,193	426	914	22	5,555	59.7	86.1	86.1	40.7	64.3
20-24	4,384	469	1,225	37	6,115	22.7	60.8	61.1	16.2	31.6
25-29	2,353	261	717	27	3,358	13.7	41.8	46.9	8.0	17.0
30-34	975	97	348	7	1,427	10.0	35.5	36.9	2.8	12.7
35-39	328	27	131	3	489	10.4	31.4	33.7	3.0	13.1
40+	59	6	18	0	83	13.0	35.3	24.7	-	14.9
ALL AGES	12,369	1,307	3,389	96	17,161	22.9	57.1	56.1	9.8	27.1

* Births to unwed mothers per 100 births in specified group.
** Each race includes births to mothers who indicated Hispanic origin on certificate.

TABLE 7-29

BIRTHS WITH CONGENITAL ANOMALIES MENTIONED ON BIRTH CERTIFICATE BY COUNTY OF RESIDENCE
ARIZONA, 1987

Congenital Anomalies	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL	520	29	13	22	9	6	3	3	251	40	24	74	22	3	9	12
Rate per 1,000 Births	8.2	15.7	8.1	11.0	15.8	13.5	24.2	15.2	6.9	34.0	12.1	6.8	10.3	5.5	7.7	6.1
Anencephalus and Similar Anomalies	6	-	1	-	-	-	-	-	1	-	1	1	-	1	-	1
Spina Bifida	7	1	-	-	1	-	-	-	2	-	2	1	-	-	-	-
Other Congenital Anomalies of Nervous System	17	-	-	1	1	-	-	-	8	-	-	5	-	-	1	1
Congenital Anomalies of Eye	6	-	-	-	-	-	-	-	2	1	-	3	-	-	-	-
Congenital Anomalies of Ear, Face, and Neck	23	3	-	-	-	-	-	-	13	2	1	1	1	-	-	2
Bulbus Cordis Anomalies and Anomalies of Cardial Septal Closure	12	-	-	4	-	-	-	-	3	-	1	3	-	-	-	1
Other Congenital Anomalies of Heart	24	1	-	1	1	-	-	-	13	-	-	5	2	-	-	1
Other Congenital Anomalies of Circulatory System	13	1	-	2	-	-	-	-	6	-	2	2	-	-	-	-
Congenital Anomalies of Respiratory System	11	1	1	1	-	-	-	-	6	1	-	-	-	-	1	-
Cleft Palate and Cleft Lip	51	4	2	2	1	-	-	-	22	4	1	10	3	-	1	1
Other Congenital Anomalies of Upper Alimentary Tract	9	1	-	-	-	-	-	1	4	-	-	2	1	-	-	-
Other Congenital Anomalies of Digestive System	3	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-
Congenital Anomalies of Genital Organs	51	2	2	1	-	2	-	-	27	9	1	6	-	1	-	-
Congenital Anomalies of Urinary System	15	-	-	-	-	-	-	-	10	1	1	1	-	-	-	-
Certain Congenital Musculoskeletal Deformities	43	5	-	1	1	-	1	2	17	5	1	4	3	1	1	1
Other Congenital Anomalies of Limbs	52	5	2	4	2	1	-	-	22	1	4	6	3	-	2	-
Other Congenital Musculoskeletal Anomalies	27	-	1	-	-	-	-	-	14	2	1	5	2	-	2	-
Congenital Anomalies of the Integument	48	1	1	1	-	1	-	-	27	10	1	3	2	-	1	-
Chromosomal Anomalies	27	2	1	1	-	-	1	-	15	2	2	2	-	-	-	1
Other and Unspecified Anomalies	75	1	2	3	2	2	1	-	38	2	5	12	4	-	-	3

TABLE 7-30

BIRTHS WITH CONGENITAL ANOMALIES MENTIONED ON BIRTH CERTIFICATE BY ETHNIC GROUP* AND SEX OF CHILD
ARIZONA, 1987

Congenital Anomalies	All Ethnic Groups	White	Non-White	White		Native Americans			Black			Other Race		
				M	F	T	M	F	T	M	F	T	M	F
Total Births	63,320	53,606	9,814	27,414	26,092	5,973	3,010	2,963	2,887	1,472	1,415	954	486	468
Total Births with Anomalies Mentioned	520	424	96	244	180	73	46	27	18	12	6	4	2	2
Rate per 1,000 Births	8.2	7.9	9.8	8.9	6.9	12.2	15.3	9.1	6.2	8.2	4.2	4.2	4.1	4.3
Anencephalus and Similar Anomalies	6	5	1	4	1	1	-	1	-	-	-	-	-	-
Spina Bifida	7	4	3	2	2	3	2	1	-	-	-	-	-	-
Other Congenital Anomalies of Nervous System	17	17	-	11	6	-	-	-	-	-	-	-	-	-
Congenital Anomalies of Eye	6	5	1	2	3	-	-	-	1	1	-	-	-	-
Congenital Anomalies of Ear, Face, and Neck	23	16	7	9	7	5	4	1	-	-	-	2	1	1
Bulbus Cordis Anomalies and Anomalies of Cardiac Septal Closure	12	7	5	3	4	5	1	4	-	-	-	-	-	-
Other Congenital Anomalies of Heart	24	22	2	11	11	2	1	1	-	-	-	-	-	-
Other Congenital Anomalies of Circulatory System	13	9	4	5	4	3	1	2	1	-	1	-	-	-
Congenital Anomalies of Respiratory System	11	9	2	2	7	2	1	1	-	-	-	-	-	-
Cleft Palate and Cleft Lip	51	39	12	16	23	10	9	1	1	1	-	1	-	1
Other Congenital Anomalies of Upper Alimentary Tract	9	7	2	4	3	2	-	2	-	-	-	-	-	-
Other Congenital Anomalies of Digestive System	3	2	1	1	1	1	1	-	-	-	-	-	-	-
Congenital Anomalies of Genital Organs	51	46	5	42	4	3	3	-	1	1	-	1	1	-
Congenital Anomalies of Urinary System	15	13	2	10	3	1	-	1	1	-	1	-	-	-
Certain Congenital Musculoskeletal Deformities	43	37	6	20	17	5	2	3	1	1	-	-	-	-
Other Congenital Anomalies of Limbs	52	36	16	20	16	8	6	2	8	6	2	-	-	-
Other Congenital Musculoskeletal Anomalies	27	25	2	14	11	1	-	1	1	-	1	-	-	-
Congenital Anomalies of the Integument	48	44	4	20	24	2	1	1	2	1	1	-	-	-
Chromosomal Anomalies	27	23	4	14	9	4	4	-	-	-	-	-	-	-
Other and Unspecified Congenital Anomalies	75	58	17**	34	24	15	10	5	1	1		-	-	-

* Each race includes births of Hispanic parentage.
** Includes one record with unspecified gender.

TABLE 7-31

RATES* OF BIRTHS WITH CONGENITAL ANOMALIES BY ETHNIC GROUP AND SEX OF CHILD ARIZONA, 1971 - 1987

	ALL ETHNIC GROUPS															
		Births With congenital anomalies				White		Native Americans			Black			Other race		
YEAR	All births	Number	Rate	White	Non White	M	F	T	M	F	T	M	F	T	M	F
1971	38,521	704	18.3	16.9	25.8	20.0	13.6	26.9	31.5	22.2	22.6	25.4	19.5	28.9	40.3	15.6
1972	37,501	483	12.9	12.1	17.0	14.0	10.2	18.5	20.2	16.6	13.8	16.8	10.5	13.6	24.0	-
1973	38,025	492	12.9	11.4	21.2	12.6	10.1	25.0	26.8	23.2	11.5	10.5	12.6	23.7	24.2	23.2
1974	39,906	614	15.4	14.2	21.6	15.3	13.1	26.1	25.6	26.7	13.3	16.1	10.7	11.6	8.7	14.9
1975	39,543	508	12.8	11.9	18.2	12.8	10.9	21.9	19.3	24.3	10.8	13.6	7.9	9.3	18.4	-
1976	40,028	501	12.5	11.2	19.5	12.7	9.6	21.3	22.7	19.9	16.6	14.9	18.1	13.2	12.6	13.9
1977	41,827	460	11.0	10.3	14.8	11.0	9.6	16.7	21.8	11.1	12.6	13.1	12.1	5.9	7.1	4.5
1978	43,058	512	11.9	11.5	14.1	12.6	10.3	15.5	13.7	17.7	12.4	15.4	9.0	7.9	8.0	7.9
1979	46,549	407	8.7	8.2	11.6	9.7	6.6	11.8	12.0	11.6	11.7	13.8	9.4	10.4	3.2	18.9
1980	50,049	436	8.7	8.4	10.2	10.8	6.0	10.9	12.6	9.7	9.2	10.3	8.0	8.1	9.5	6.6
1981	51,620	451	8.7	8.3	11.0	9.3	7.2	12.8	10.7	18.6	4.5	3.5	5.7	4.4	9.1	-
1982	52,628	459	8.7	8.5	10.1	9.2	7.7	12.1	13.7	10.5	6.5	8.3	4.6	6.6	5.4	7.7
1983	52,919	463	8.7	8.0	12.5	8.9	7.0	13.8	19.2	10.2	9.8	10.8	8.8	11.5	15.6	7.5
1984	55,109	485	8.8	8.0	12.9	8.3	7.7	16.3	16.3	16.2	7.3	8.8	2.8	6.2	4.7	7.9
1985	59,344	511	8.6	7.8	13.0	8.5	6.6	16.4	16.5	16.4	7.1	9.6	4.7	7.7	11.1	4.0
1986	60,822	482	7.9	7.0	13.0	8.0	5.9	16.4	13.6	19.3	8.1	9.8	6.1	6.0	4.7	7.5
1987	63,320	520	8.2	7.9	9.8	8.9	6.9	12.2	15.3	9.1	6.2	8.2	4.2	4.2	4.1	4.3

* Rates per 1,000 live births in specific group.

MATERNAL, PERINATAL AND INFANT MORTALITY STATISTICS

TABLE 8-1

MATERNAL DEATHS* BY AGE GROUP AND MATERNAL MORTALITY RATES,**
ARIZONA AND UNITED STATES, 1980-1987

Year	Total Number of Deaths	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Arizona Rate	U.S. Rate
1980	4	0	1	1	0	1	1	0	0	8.0	9.2
1981	4	0	1	1	1	0	0	1	0	7.7	9.3
1982	4	0	0	1	1	0	1	1	0	7.6	8.9
1983	3	0	1	1	0	0	1	0	0	5.7	8.0
1984	4	0	0	0	2	1	1	0	0	7.3	7.8
1985	1	0	0	0	0	1	0	0	0	1.7	7.8
1986	1	0	1	0	0	0	0	0	0	1.6	6.7#
1987	1	0	0	0	1	0	0	0	0	1.6	6.3#

* Maternal deaths are those assigned to complications of pregnancy, childbirth and puerperium, category numbers 630-676 of the Ninth Revision. International Classification of Diseases, 1975.

** Rates per 100,000 live births

\# Preliminary

TABLE 8-2

PERINATAL DEATHS* AND PERINATAL MORTALITY RATES BY COUNTY OF MOTHER'S RESIDENCE, ARIZONA, 1987

County	Early infant deaths		Late fetal deaths		Total perinatal deaths	
	Number	Rate	Number	Rate	Number	Rate
ARIZONA	313	4.9	422	6.7	735	11.6
Apache	4	2.2	15	8.1	19	10.3
Cochise	9	5.6	11	6.8	20	12.4
Coconino	4	2.0	14	7.0	18	9.0
Gila	3	5.3	2	3.5	5	8.8
Graham	-	-	2	4.5	2	4.5
Greenlee	-	-	2	16.1	2	16.1
La Paz	1	5.1	2	10.1	3	15.2
Maricopa	200	5.5	242	6.6	442	12.1
Mohave	6	5.1	10	8.5	16	13.6
Navajo	13	6.6	13	6.6	26	13.2
Pima	44	4.0	68	6.2	112	10.3
Pinal	12	5.7	13	6.1	25	11.8
Santa Cruz	5	9.1	4	7.3	9	16.4
Yavapai	4	3.4	8	6.8	12	10.2
Yuma	8	4.1	16	8.1	24	12.2

* Perinatal mortality refers to fetal deaths of 20 weeks or more of uterogestation combined with deaths that occurred before the seventh day of life. Rates per 1,000 live births in specified group.

TABLE 8-3

FETAL DEATHS OCCURRING IN ARIZONA BY COUNTY OF OCCURRENCE,*
ARIZONA, 1980-1987

County	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	428	394	434	393	371	432	391	433
Apache	6	16	12	14	13	10	13	15
Cochise	10	13	12	7	9	10	8	10
Coconino	16	17	22	25	18	22	12	10
Gila	3	8	3	7	5	2	4	2
Graham	2	3	2	4	3	1	5	3
Greenlee	2	1	2	1	-	-	-	1
La Paz	NA	NA	NA	1	-	-	-	1
Maricopa	229	198	225	190	211	232	225	269
Mohave	5	3	4	8	10	10	11	10
Navajo	5	11	11	10	10	14	6	9
Pima	113	97	115	89	70	91	83	73
Pinal	9	10	6	7	7	4	7	7
Santa Cruz	3	4	1	3	3	-	-	3
Yavapai	8	2	9	7	5	11	6	5
Yuma	17	11	10	20	7	15	11	15

* Resident and non-resident fetal deaths occurring in Arizona.

TABLE 8-4

FETAL MORTALITY BY COUNTY OF RESIDENCE OF MOTHER,
ARIZONA, SELECTED YEARS, 1950-1987

Santa Cruz	1950	1960	1970	1975	1980*	1985	1986	1987
ARIZONA	381	463	385	351	428	415	381	422
Apache	13	14	14	9	6	11	15	15
Cochise	8	29	25	19	10	12	10	11
Coconino	13	20	9	12	16	24	7	14
Gila	18	10	12	8	3	3	6	2
Graham	4	5	2	6	2	2	4	2
Greenlee	7	4	3	4	2	2	1	2
La Paz	NA	NA	NA	NA	NA	2	1	2
Maricopa	175	228	200	166	229	217	208	242
Mohave	2	4	4	5	5	8	9	10
Navajo	11	21	9	20	5	20	8	13
Pima	68	77	69	54	113	72	76	68
Pinal	27	28	12	25	9	12	19	13
Santa Cruz	6	4	3	8	3	5	1	4
Yavapai	14	6	8	3	8	12	7	8
Yuma	15	13	14	12	17	13	9	16

* Data for 1980 refer to fetal deaths occurring in Arizona by county of occurrence.

TABLE 8-5

FETAL MORTALITY RATES* BY COUNTY OF RESIDENCE OF MOTHER,
ARIZONA, SELECTED YEARS, 1950-87

County	1950	1960	1970	1975	1980	1985	1986	1987
ARIZONA	18.6	12.6	10.2	8.9	8.5	7.0	6.3	6.7
Apache	17.1	9.5	10.2	6.3	4.9	5.9	8.5	8.1
Cochise	10.5	17.6	19.2	12.6	6.6	7.7	6.6	6.8
Coconino	16.9	13.8	6.4	8.1	7.1	12.3	3.8	7.0
Gila	25.1	13.4	17.3	12.0	5.2	4.7	9.6	3.5
Graham	10.4	15.0	5.4	14.2	5.0	4.9	10.1	4.5
Greenlee	15.9	15.7	12.9	13.5	6.5	12.4	9.4	16.1
La Paz*	NA	NA	NA	NA	NA	8.5	4.7	10.1
Maricopa	19.9	12.8	10.2	8.3	8.2	6.4	5.9	6.6
Mohave	8.7	21.7	8.6	9.2	5.8	8.3	8.5	8.5
Navajo	12.3	14.6	6.1	12.3	4.2	10.6	4.2	6.6
Pima	17.6	10.8	10.2	7.4	11.4	6.7	7.3	6.2
Pinal	19.2	14.4	7.7	14.6	9.8	5.9	9.3	6.1
Santa Cruz	24.0	11.6	10.1	22.2	9.7	9.6	2.0	7.3
Yavapai	28.5	9.5	14.7	4.8	9.5	11.0	6.2	6.8
Yuma	20.5	10.2	10.1	7.5	10.2	6.6	4.6	8.1

* Per 1,000 live births

TABLE 8-6

FETAL MORTALITY BY COUNTY OF RESIDENCE OF MOTHER, RACE* AND SEX OF CHILD
ARIZONA, 1987

County of Occurrence	TOTAL FETAL DEATHS			WHITE		NATIVE AMERICANS			BLACK			OTHER		
	All	White	Non-White	M	F	T	M	F	T	M	F	T	M	F
TOTAL	422	337	85	172	165	48	27	21	34	19	15	3	1	2
Apache	15	4	11	1	3	11	4	7	-	-	-	-	-	-
Cochise	11	10	1	6	4	-	-	-	1	1	-	-	-	-
Coconino	14	8	6	4	4	5	2	3	1	-	1	-	-	-
Gila	2	1	1	-	1	1	1	-	-	-	-	-	-	-
Graham	2	2	-	1	1	-	-	-	-	-	-	-	-	-
Greenlee	2	2	-	1	1	-	-	-	-	-	-	-	-	-
La Paz	2	2	-	1	1	-	-	-	-	-	-	-	-	-
Maricopa	242	204	38	109	95	14	10	4	22	12	10	2	1	1
Mohave	10	10	-	7	3	-	-	-	-	-	-	-	-	-
Navajo	13	6	7	3	3	7	3	-	-	-	-	-	-	-
Pima	68	54	14	25	29	6	4	2	7	5	2	1	-	1
Pinal	13	8	5	5	3	4	3	1	1	-	1	-	-	-
Santa Cruz	4	4	-	2	2	-	-	-	-	-	-	-	-	-
Yavapai	8	8	-	2	6	-	-	-	-	-	-	-	-	-
Yuma	16	14	2	5	9	-	-	-	2	1	1	-	-	-

* Each race includes records with indicated Hispanic origin.

TABLE 8-7

FETAL MORTALITY BY MOTHER'S AGE GROUP AND COUNTY OF RESIDENCE, ARIZONA, 1987

		AGE GROUP									
	Total	Under 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	Unknown
Arizona	422	4	25	34	97	128	83	36	12	2	1
Rate*	6.6	28.2	7.8	6.3	5.0	6.5	7.4	9.6	22.5	90.9	-
Apache	15	0	0	0	3	7	3	1	0	1	0
Cochise	11	0	2	0	0	5	2	2	0	0	0
Coconino	14	0	1	1	4	3	3	1	1	0	0
Gila	2	0	0	0	1	1	0	0	0	0	0
Graham	2	0	0	0	1	1	0	0	0	0	0
Greenlee	2	0	0	0	2	0	0	0	0	0	0
La Paz	2	0	0	0	1	1	0	0	0	0	0
Maricopa	242	3	17	19	55	71	53	20	4	0	0
Mohave	10	0	1	0	4	2	1	2	0	0	0
Navajo	13	0	1	0	4	3	2	2	1	0	0
Pima	68	1	1	9	14	20	12	5	4	1	1
Pinal	13	0	0	1	3	6	3	0	0	0	0
Santa Cruz	4	0	0	1	1	0	1	0	0	0	0
Yavapai	8	0	0	1	2	2	0	1	2	0	0
Yuma	16	0	2	2	2	6	2	2	0	0	0

* Rates per 1,000 live births in specific group.

TABLE 8-8

INFANT MORTALITY BY COUNTY OF RESIDENCE
ARIZONA, 1950-87

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	937	1,165	670	587	619	600	491	509	525	572	569	598
Apache	81	82	36	27	23	25	21	20	25	22	16	16
Cochise	26	44	19	24	19	22	14	20	23	15	8	11
Coconino	47	67	39	32	20	20	16	22	16	21	18	15
Gila	35	35	11	11	12	5	13	5	3	5	8	3
Graham	22	15	9	8	8	14	4	3	7	4	5	4
Greenlee	15	7	9	7	5	1	5	-	2	3	1	-
La Paz	NA	NA	NA	NA	NA	NA	NA	8	1	6	-	1
Maricopa	328	478	305	289	358	333	265	266	272	319	340	368
Mohave	11	4	3	6	18	8	11	9	8	7	11	10
Navajo	96	93	43	33	27	29	18	23	18	26	12	31
Pima	111	195	120	81	72	84	76	88	96	94	94	84
Pinal	97	75	36	31	17	17	19	17	27	18	27	19
Santa Cruz	12	9	5	5	3	5	3	3	4	4	4	7
Yavapai	19	19	8	8	11	15	10	11	11	9	13	11
Yuma	37	42	27	25	26	22	16	14	12	19	12	18

TABLE 8-9

INFANT MORTALITY RATES* BY AGE AND SELECTED CAUSES
ARIZONA, UNITED STATES: 1987

Age and Cause of Death	International Classification of Diseases, Ninth Revision	ARIZONA NUMBER	ARIZONA RATE	U.S. RATE**
Total - Under 1 Year		598	944.4	997.0
Under 28 Days		376	593.8	653.8
28 Days to 364 Days		222	350.6	343.3
Certain Gastrointestinal Diseases	008-009,535,555-558	1	1.6	5.0
Pneumonia and Influenza	480-487	11	17.4	17.6
Congenital Anomalies	740-759	143	225.8	207.0
Disorders Relating to Short Gestation and Unspecified Low-Birthweight	765	123	194.3	84.8
Birth Trauma	767	2	3.2	5.0
Intrauterine Hypoxia and Birth Asphyxia	768	7	11.1	25.5
Respiratory Distress Syndrome	769	41	64.8	86.4
Other Conditions Originating in the Perinatal Period	760-764,766,770-779	84	132.7	277.9
Sudden Infant Death Syndrome	798.0	97	153.2	116.1
ALL OTHER CAUSES	RESIDUAL	89	140.6	172.1

* Per 100,000 live births
** Provisional

TABLE 8-10

INFANT MORTALITY BY COUNTY OF RESIDENCE, RACE* AND GENDER,
ARIZONA, 1987

County of Residence	ALL DEATHS			WHITE			NON-WHITE			NATIVE AMERICANS			BLACK			ASIAN		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	598	347	251	471	279	192	127	68	59	79	45	34	45	23	22	3	-	3
Apache	16	11	5	3	2	1	13	9	4	13	9	4	-	-	-	-	-	-
Cochise	11	8	3	9	6	3	2	2	-	-	-	-	2	2	-	-	-	-
Coconino	15	9	6	6	5	1	9	4	5	9	4	5	-	-	-	-	-	-
Gila	3	2	1	2	2	-	1	-	1	1	-	1	-	-	-	-	-	-
Graham	4	1	3	4	1	3	-	-	-	-	-	-	-	-	-	-	-	-
Greenlee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La Paz	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Maricopa	368	208	160	323	185	138	45	23	22	10	6	4	33	17	16	2	-	2
Mohave	10	8	2	6	4	2	4	4	-	4	4	-	-	-	-	-	-	-
Navajo	31	15	16	7	3	4	24	12	12	24	12	12	-	-	-	-	-	-
Pima	84	50	34	65	39	26	19	11	8	11	7	4	7	4	3	1	-	1
Pinal	19	9	10	11	6	5	8	3	5	6	3	3	2	-	2	-	-	-
Santa Cruz	7	3	4	7	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Yavapai	11	10	1	11	10	1	-	-	-	-	-	-	-	-	-	-	-	-
Yuma	18	12	6	16	12	4	2	-	2	1	-	1	1	-	1	-	-	-

* Each race includes records with indicated Hispanic origin. Compare Table 8-11.

TABLE 8-11

HISPANIC INFANTS MORTALITY BY COUNTY OF RESIDENCE, RACE AND GENDER
ARIZONA, 1987

County of Santa Cruz	All Deaths			White			Non-White			Native Americans			Black		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	141	79	62	132	73	59	9	6	3	5	4	1	4	2	2
Apache	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cochise	5	3	2	5	3	2	-	-	-	-	-	-	-	-	-
Coconino	4	3	1	4	3	1	-	-	-	-	-	-	-	-	-
Gila	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Graham	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-
Greenlee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La Paz	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Maricopa	77	41	36	74	39	35	3	2	1	1	1	-	2	1	1
Mohave	1	1	-	-	-	-	1	1	-	1	1	-	-	-	-
Navajo	2	-	2	1	-	1	1	-	1	1	-	1	-	-	-
Pima	28	15	13	25	12	13	3	3	-	2	2	-	1	1	-
Pinal	3	3	-	3	3	-	-	-	-	-	-	-	-	-	-
Santa Cruz	5	2	3	5	2	3	-	-	-	-	-	-	-	-	-
Yavapai	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Yuma	12	8	4	11	8	3	1	-	1	-	-	-	1	-	1

TABLE 8-12

INFANT MORTALITY RATES* BY COUNTY OF RESIDENCE, CHILD'S ETHNIC GROUP AND GENDER
ARIZONA, 1987

County of Residence	ALL INFANT DEATHS			WHITE**			NON-WHITE			HISPANIC			NATIVE AMERICANS			BLACK		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
ARIZONA	9.4	10.7	8.1	9.0	10.7	7.4	12.9	14.5	12.2	8.0	8.8	7.2	13.2	15.0	11.5	15.6	15.6	15.6
Apache	8.6	11.7	5.5	10.6	13.9	7.1	8.3	11.3	5.2	-	-	-	8.3	11.4	5.2	-	-	-
Cochise	6.8	9.5	3.9	6.5	8.2	4.6	8.9	18.3	-	8.5	9.9	7.1	-	-	-	12.5	25.6	-
Coconino	7.5	8.3	6.5	5.9	8.8	2.2	9.1	7.8	10.5	16.7	23.8	8.8	9.7	8.4	11.0	-	-	-
Gila	5.3	7.4	3.4	5.2	11.4	-	5.3	-	10.9	7.1	17.2	-	-	-	-	-	-	-
Graham	9.0	4.5	13.3	10.7	5.6	15.5	-	-	-	6.1	-	11.6	-	-	-	-	-	-
Greenlee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
La Paz	5.1	9.7	-	6.9	13.0	-	-	-	-	16.4	33.3	-	-	-	-	-	-	-
Maricopa	10.0	11.1	9.0	9.8	10.9	8.6	12.8	12.8	12.7	8.3	8.6	8.0	10.2	12.3	8.2	17.2	17.2	17.2
Mohave	8.5	13.4	3.4	5.4	7.3	3.6	56.3	114.3	-	9.3	16.4	-	69.0	148.2	-	-	-	-
Navajo	15.6	15.1	16.2	10.4	8.8	12.2	18.3	18.4	18.2	11.5	-	20.6	18.6	18.7	18.5	-	-	-
Pima	7.7	8.9	6.4	6.7	5.2	5.5	16.1	18.3	13.8	6.7	7.0	6.3	24.5	30.6	18.2	13.3	15.3	11.3
Pinal	8.9	8.4	9.5	6.5	6.9	6.1	18.0	14.2	21.6	3.4	6.9	-	18.1	18.5	17.6	18.5	-	33.9
Santa Cruz	12.8	10.9	14.8	13.0	10.9	15.2	-	-	-	10.6	8.1	13.2	-	-	-	-	-	-
Yavapai	9.4	17.3	1.7	9.7	17.8	1.7	-	-	-	6.6	12.8	-	-	-	-	11.5	-	25.0
Yuma	9.1	12.1	6.2	8.9	13.1	4.4	14.0	-	30.8	11.1	15.7	7.0		-				

* Rate per 1,000 live births in specific group, and calculated only if at least ten births recorded in that group in 1986.
** Includes only whites of non-Hispanic origin.
- No infant deaths recorded in 1986.

TABLE 8-13

NEONATAL MORTALITY BY COUNTY OF RESIDENCE
ARIZONA, 1960-87

County	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	711	468	381	414	381	305	314	305	348	331	376
Apache	30	17	10	9	12	6	11	9	12	9	5
Cochise	30	16	18	13	15	10	15	13	8	5	10
Coconino	24	26	17	11	11	10	13	5	9	6	7
Gila	19	9	6	8	2	8	2	1	3	5	3
Graham	8	6	4	4	10	2	2	4	2	3	1
Greenlee	5	5	6	2	-	5	-	2	2	1	-
La Paz	NA	NA	NA	NA	NA	NA	3	1	4	-	1
Maricopa	333	229	206	260	230	174	167	170	197	204	236
Mohave	1	3	5	10	4	5	4	6	2	4	6
Navajo	33	15	18	15	15	8	9	8	13	4	17
Pima	142	86	47	48	53	47	56	62	68	66	54
Pinal	39	28	18	14	8	8	15	11	7	12	12
Santa Cruz	6	3	4	3	2	2	2	2	4	3	6
Yavapai	12	6	4	4	5	6	7	5	6	5	7
Yuma	29	19	18	13	14	14	8	6	11	4	11

TABLE 8-14

NEONATAL MORTALITY RATES* BY COUNTY OF RESIDENCE
ARIZONA, UNITED STATES: 1960-87

County	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
U.S.	18.7	15.1	11.8	8.4	7.9	7.7	7.3	6.9	6.9	6.7**	6.5**
ARIZONA	19.4	12.4	9.6	8.3	7.4	5.8	5.9	5.5	5.9	5.4	5.9
Apache	20.3	12.4	6.9	5.5	7.1	3.3	6.2	5.0	6.5	5.1	2.7
Cochise	18.2	11.8	11.9	8.2	9.1	6.4	9.6	8.0	5.1	3.3	6.2
Coconino	16.5	18.5	11.5	6.0	6.3	5.7	7.2	2.8	4.6	3.3	3.5
Gila	25.5	13.0	9.0	11.3	2.6	9.9	2.9	1.5	4.7	8.0	5.3
Graham	24.0	16.2	9.4	7.8	19.6	4.3	4.6	9.0	4.9	7.6	2.3
Greenlee	19.6	21.6	20.2	7.3	-	19.5	-	10.3	12.4	9.4	-
La Paz	NA	NA	NA	NA	NA	NA	12.7	5.1	17.1	-	5.1
Maricopa	18.7	11.6	10.3	9.7	8.3	6.1	5.8	5.5	5.8	5.8	6.4
Mohave	5.4	6.5	9.1	11.5	4.5	5.6	4.3	6.1	2.1	3.8	5.1
Navajo	22.9	10.1	11.0	7.9	8.3	4.2	4.7	4.3	6.9	2.1	8.6
Pima	19.9	12.8	6.4	5.4	5.8	5.1	5.8	6.4	6.6	6.3	4.9
Pinal	20.1	18.0	10.5	7.6	4.2	4.1	8.0	5.9	3.4	5.8	5.6
Santa Cruz	17.4	10.1	11.0	6.0	3.9	4.1	4.4	3.9	7.6	5.9	11.0
Yavapai	19.0	11.0	6.3	4.3	5.0	5.6	6.8	5.0	5.5	4.4	6.0
Yuma	22.7	13.6	11.1	7.3	7.2	7.4	4.8	3.4	5.6	2.0	5.6

* Per 1,000 live births
** Preliminary

DEATH STATISTICS

TABLE 9-1

MORTALITY BY COUNTY OF RESIDENCE
ARIZONA, 1950-87

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	6,317	10,067	14,857	16,964	21,226	21,318	21,951	22,482	23,785	24,577	25,409	26,670
Apache	255	266	266	316	302	302	317	294	306	330	335	343
Cochise	322	428	511	512	631	628	644	712	664	687	662	764
Coconino	161	267	288	278	309	308	339	320	341	379	303	392
Gila	245	253	282	284	330	337	417	385	396	381	399	408
Graham	112	123	149	174	171	184	164	184	175	169	189	193
Greenlee	87	71	77	74	86	52	73	61	66	47	50	67
La Paz	NA	N	NA	NA	NA	NA	NA	140	154	1 6	128	151
Maricopa	2,735	5,011	7,895	9,147	11,769	11,923	12,214	12,433	13,398	13,661	14,106	14,746
Mohave	90	97	238	406	549	548	612	593	607	753	795	877
Navajo	300	273	341	355	415	415	400	406	428	460	484	462
Pima	1,051	2,058	3,062	3,511	4,311	4,253	4,279	4,506	4,734	4,865	5,090	5,295
Pinal	401	474	548	579	731	745	741	782	814	785	942	922
Santa Cruz	63	78	90	120	121	125	135	131	150	148	147	159
Yavapai	267	348	555	647	801	813	878	961	964	1,057	1,032	1,213
Yuma	228	320	555	561	700	685	738	574	588	719	667	678

TABLE 9-2

MORTALITY RATES* BY COUNTY OF RESIDENCE
ARIZONA, 1950-87

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
U.S.	9.6	9.5	9.4	8.5	8.8	8.6	8.5	8.6	8.7	8.7	8.7	8.7**
ARIZONA	8.4	7.7	8.4	7.6	7.8	7.6	7.6	7.7	7.8	7.7	7.6	7.7
Apache	9.2	8.7	8.2	7.7	5.8	5.8	5.7	5.2	5.9	5.8	5.5	5.5
Cochise	10.2	7.8	8.3	6.9	7.3	7.1	7.2	7.8	7.3	7.1	6.8	7.6
Coconino	6.7	6.4	6.0	4.3	4.1	3.8	4.1	3.9	4.1	4.4	4.3	4.3
Gila	10.1	9.8	9.6	8.7	8.9	8.9	10.9	9.9	10.5	10.0	10.0	10.2
Graham	8.6	8.8	9.0	8.6	7.5	7.9	6.9	7.6	7.3	7.2	7.7	7.8
Greenlee	6.8	6.2	7.5	6.2	7.5	4.3	5.6	5.1	5.8	5.4	5.2	7.0
La Paz	NA	NA	NA	NA	NA	NA	NA	10.8	11.5	9.4	9.1	10.7
Maricopa	8.2	7.6	8.1	7.5	7.8	7.7	7.6	7.6	7.7	7.6	7.4	7.4
Mohave	10.6	12.5	9.2	10.9	9.8	9.7	10.7	9.9	9.3	10.4	10.3	11.1
Navajo	10.2	7.2	7.2	6.1	6.1	6.0	5.6	5.6	6.0	6.4	6.5	6.1
Pima	7.4	7.7	8.7	8.0	8.1	7.7	7.5	7.7	7.9	7.8	7.9	8.0
Pinal	9.3	7.6	8.0	6.6	8.0	8.0	7.8	8.1	8.3	7.8	9.1	8.6
Santa Cruz	6.7	7.2	6.4	6.9	5.9	5.9	6.1	5.9	6.7	5.5	5.3	5.4
Yavapai	10.7	12.0	15.0	13.2	11.8	11.7	12.2	13.1	11.9	12.0	11.2	12.8
Yuma	8.1	6.9	9.1	8.0	7.7	7.5	7.8	7.1	6.9	8.0	7.6	7.6

* Per 1,000 estimated mid-year population
** Preliminary

TABLE 9-3

MORTALITY BY COUNTY OF OCCURRENCE*
ARIZONA, 1950-87

County	1950	1960	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	6,822	10,557	15,259	17,450	22,054	21,925	22,655	23,205	24,598	25,382	26,404	27,628
Apache	308	315	184	231	240	199	231	212	202	250	254	250
Cochise	315	387	474	434	499	483	519	589	556	566	551	589
Coconino	183	322	304	326	382	363	392	391	439	469	493	496
Gila	240	233	276	254	284	303	355	304	308	299	312	329
Graham	102	102	132	145	132	133	117	154	144	141	139	150
Greenlee	76	71	63	58	61	40	59	38	42	19	27	29
La Paz	NA	NA	NA	NA	NA	NA	NA	118	120	120	132	133
Maricopa	2,958	5,318	8,275	9,671	12,671	12,730	13,169	13,450	14,614	14,791	15,345	15,975
Mohave	95	110	218	377	447	440	474	495	568	642	764	832
Navajo	266	224	291	273	303	325	294	290	298	306	382	369
Pima	1,251	2,193	3,355	3,940	4,960	4,826	4,847	5,060	5,234	5,413	5,596	5,873
Pinal	418	453	443	395	484	462	467	485	437	496	573	590
Santa Cruz	67	83	92	92	81	87	99	99	111	110	114	112
Yavapai	308	429	613	665	786	787	833	870	874	978	977	1,122
Yuma	235	317	539	589	724	747	799	650	651	782	745	779

* Resident and non-resident deaths occurring in Arizona.

TABLE 9-4

RESIDENT MORTALITY BY MONTH OF OCCURRENCE
ARIZONA, 1970-87

	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
1970	1,305	1,231	1,273	1,206	1,305	1,189	1,215	1,198	1,155	1,236	1,265	1,279	14,857
Percent	8.8	8.3	8.6	8.1	8.8	8.0	8.0	8.1	7.8	8.3	8.5	8.6	100.0
1980	1,904	1,649	1,835	1,729	1,686	1,663	1,726	1,651	1,646	1,659	1,779	2,299	21,226
Percent	9.0	7.8	8.6	8.1	7.9	7.8	8.1	7.8	7.8	7.8	8.4	10.8	100.0
1981	2,098	1,666	1,856	1,828	1,742	1,642	1,774	1,715	1,612	1,747	1,765	1,873	21,318
Percent	9.8	7.8	8.7	8.6	8.2	7.7	8.3	8.0	7.6	8.2	8.3	8.8	100.0
1982	2,013	1,013	1,948	1,790	1,762	1,687	1,734	1,781	1,727	1,815	1,723	1,958	21,951
Percent	9.2	9.2	8.9	8.2	8.0	7.7	7.9	8.1	7.9	8.3	7.8	8.9	100.0
1983	1,982	1,902	1,979	1,968	1,924	1,677	1,805	1,803	1,765	1,822	1,847	2,008	22,482
Percent	8.8	8.5	8.8	8.8	8.6	7.5	8.0	8.0	7.9	8.1	8.2	8.9	100.0
1984	2,014	1,978	2,244	2,108	2,036	1,865	1,833	1,852	1,737	1,935	2,011	2,172	23,785
Percent	8.5	8.3	9.4	8.9	8.6	7.8	7.7	7.8	7.3	8.1	8.5	9.1	100.0
1985	2,314	2,201	2,110	1,966	2,017	1,956	1,952	1,874	1,919	1,958	2,042	2,268	24,577
Percent	9.4	9.0	8.6	8.0	8.2	8.0	7.9	7.6	7.8	8.0	8.3	9.2	100.0
1986	2,412	2,163	2,283	2,068	2,053	2,061	2,015	2,112	1,942	2,090	1,996	2,214	25,409
Percent	9.5	8.5	9.0	8.1	8.1	8.1	7.9	8.3	7.6	8.2	7.9	8.7	100.0
1987	2,482	2,212	2,363	2,238	2,176	2,120	2,149	2,120	1,996	2,122	2,218	2,475	26,670
Percent	9.3	8.3	8.7	8.4	8.2	7.9	8.1	7.9	7.5	8.0	8.3	9.3	100.0

TABLE 9-5

DEATHS BY MONTH AND DAY OF OCCURRENCE,
ARIZONA RESIDENTS, 1987

Day of Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
01	95	92	74	81	66	72	70	73	63	85	66	67
02	92	87	88	70	62	78	72	71	64	64	55	76
03	81	85	74	70	65	70	73	76	68	52	69	85
04	83	93	93	85	75	67	75	81	60	67	71	84
05	71	71	78	61	74	74	74	58	64	77	85	67
06	73	78	80	95	73	93	83	77	74	66	73	82
07	87	32	89	75	77	75	65	69	58	77	75	93
08	86	55	79	68	79	72	83	68	71	80	55	69
09	72	79	73	68	78	64	59	64	54	70	66	60
10	85	73	75	72	79	65	77	79	74	73	72	81
11	76	78	75	73	71	76	73	72	75	74	78	85
12	79	79	61	76	63	68	71	63	83	78	70	62
13	66	77	66	79	62	78	64	61	56	60	57	79
14	82	77	67	58	65	70	69	61	63	71	96	71
15	97	83	74	88	69	62	62	81	56	56	80	71
16	89	76	75	68	68	76	64	74	74	66	87	89
17	79	81	90	69	86	62	61	73	66	71	70	94
18	75	80	77	78	60	71	66	52	64	64	82	82
19	81	74	55	71	70	69	73	70	75	60	63	68
20	73	84	72	75	69	76	84	73	83	91	87	75
21	85	83	81	81	80	62	82	66	68	66	67	66
22	80	80	63	74	80	67	70	67	59	65	72	80
23	93	70	76	83	82	67	73	61	57	67	72	89
24	79	68	76	83	66	73	58	72	62	59	84	89
25	78	67	86	76	74	69	55	67	67	70	92	94
26	72	85	78	62	70	67	83	69	60	72	62	91
27	79	84	78	68	63	61	60	56	58	69	91	77
28	78	91	79	82	76	66	71	70	75	64	63	88
29	76		78	70	66	83	66	66	63	57	87	84
30	68		72	79	49	58	53	70	82	66	71	93
31	72		81		59		60	60		65		84
Total	2,482	2,212	2,363	2,238	2,176	2,120	2,149	2,120	1,996	2,122	2,218	2,475

TABLE 9-6

MORTALITY BY FIVE-YEAR AGE GROUPS AND COUNTY OF RESIDENCE
ARIZONA, 1987

County	All Ages	Under 1 Day	1-6 Days	7-27 Days	28 & Over	Total Infant	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Unknown
ARIZONA	26,670	224	89	63	222	598	149	60	63	253	361	434	430	475	514	623	890	1,333	2,107	2,947	3,575	3,827	3,440	4,561	30
Apache	343	3	1	1	11	16	6	2	4	16	24	14	14	19	25	15	15	17	18	16	27	30	26	39	-
Cochise	764	6	3	1	1	11	5	1	2	10	10	11	7	12	14	15	23	33	65	86	111	123	98	126	1
Coconino	392	4	-	3	8	15	3	1	2	15	17	18	18	16	14	13	21	20	24	39	41	33	40	40	2
Gila	408	2	1	-	-	3	3	1	1	3	8	8	2	6	9	12	13	20	40	48	61	66	51	53	-
Graham	193	-	-	1	3	4	1	3	-	-	1	3	-	2	-	2	9	13	17	17	34	25	26	36	-
Greenlee	67	-	-	-	-	-	-	-	-	1	4	1	1	2	1	5	3	3	6	6	6	11	11	6	-
La Paz	151	1	-	-	-	1	-	2	-	-	3	4	1	3	2	6	3	8	19	21	29	13	23	13	-
Maricopa	14,746	143	57	36	132	368	87	32	31	121	168	228	239	255	274	352	488	685	1,140	1,549	1,951	2,136	2,007	2,619	16
Mohave	877	3	3	-	4	10	2	-	1	12	7	12	13	10	15	24	33	51	78	132	149	144	83	99	2
Navajo	462	8	5	4	14	31	7	6	2	12	18	16	9	13	14	16	20	24	42	37	44	42	47	62	-
Pima	5,295	30	14	10	30	84	27	5	12	42	61	77	72	90	106	103	166	273	406	626	695	751	659	1,037	3
Pinal	922	11	1	-	7	19	4	2	2	8	15	21	26	22	14	26	42	62	85	103	132	132	103	102	2
Santa Cruz	159	5	-	1	1	7	-	1	-	-	3	1	3	1	3	1	3	8	17	24	11	18	27	31	-
Yavapai	1,213	3	1	3	4	11	-	-	3	4	10	9	16	11	9	23	33	68	89	167	189	190	167	214	-
Yuma	678	5	3	3	7	18	4	4	3	9	12	11	9	13	14	10	18	48	61	76	95	113	72	84	4

TABLE 9-7

MORTALITY BY COUNTY OF RESIDENCE, RACE* AND GENDER
ARIZONA, 1987

County of Residence	All Deaths	TOTAL All Races		White		Total Non-White		Black		Native Americans		Other	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
ARIZONA	26,670	14,929	11,741	13,822	11,024	1,107	717	369	258	671	417	67	42
Apache	343	207	136	45	31	162	105	-	1	162	104	-	-
Cochise	764	413	351	402	346	11	5	9	2	1	1	1	2
Coconino	392	241	151	145	108	96	43	6	2	89	41	1	-
Gila	408	242	166	222	156	20	10	-	-	20	10	-	-
Graham	193	116	77	111	73	5	4	1	-	4	4	-	-
Greenlee	67	36	31	36	30	-	1	-	1	-	-	-	-
La Paz	151	102	49	85	43	17	6	1	1	16	5	-	-
Maricopa	14,746	8,199	6,547	7,797	6,295	402	252	254	171	104	56	44	25
Mohave	877	533	344	521	341	12	3	2	-	8	1	2	2
Navajo	462	269	193	137	113	132	80	3	-	128	79	1	1
Pima	5,295	2,883	2,412	2,715	2,272	168	140	70	56	86	74	12	10
Pinal	922	539	383	479	334	60	49	10	14	50	33	-	2
Santa Cruz	159	74	85	73	85	1	-	-	-	1	-	-	-
Yavapai	1,213	666	547	663	539	3	8	1	3	1	5	1	-
Yuma	678	409	269	391	258	18	11	12	7	1	4	5	-

* Each race includes records with indicated Hispanic origin. Compare Table 9-8.

TABLE 9-8

HISPANIC* MORTALITY BY COUNTY OF RESIDENCE, RACE AND GENDER
ARIZONA, 1987

County of Residence	All Deaths	TOTAL All Races		White		Total Non-White		Black		Native Americans		Other	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
ARIZONA	2,227	1,283	944	1,260	933	23	11	5	2	13	8	5	1
Apache	7	6	1	6	1	-	-	-	-	-	-	-	-
Cochise	133	65	68	65	68	-	-	-	-	-	-	-	-
Coconino	33	20	13	20	13	-	-	-	-	-	-	-	-
Gila	41	20	21	20	20	-	-	-	-	-	-	-	-
Graham	41	25	16	25	15	-	1	-	-	-	1	-	-
Greenlee	19	14	5	14	5	-	1	-	-	-	1	-	-
La Paz	7	6	1	5	1	1	-	-	-	1	-	-	-
Maricopa	924	558	366	542	362	16	4	4	1	8	3	4	-
Mohave	15	11	4	10	4	1	-	-	-	1	-	-	-
Navajo	25	13	12	13	10	-	2	-	-	-	2	-	-
Pima	589	317	272	313	271	1	1	1	-	-	1	-	-
Pinal	128	79	49	79	48	3	1	-	-	3	-	-	1
Santa Cruz	95	38	57	38	57	-	-	-	-	-	-	-	-
Yavapai	37	23	14	23	14	-	-	-	-	-	-	-	-
Yuma	133	88	45	87	44	1	1	-	1	-	-	1	-

* Hispanic origin indicated on certificate

TABLE 9-9

DEATHS AND DEATH RATES[a] FOR SELECTED 75 CAUSES, ARIZONA AND UNITED STATES, 1987

Cause of death (Ninth Revision, International Classification of Diseases, 1975)	ARIZONA # of deaths	ARIZONA Rate	U.S. Rate
All Causes	26,670	768.8	874.0
Shigellosis and amebiasis....004,006	-	-	0.0
Certain other intestinal infections....007-009	7	0.2	0.1
Tuberculosis....010-018	5	0.1	0.1
Tuberculosis of respiratory system....010-012	18	0.5	0.6'
Other tuberculosis....013-018	5	0.1	0.1
Whooping cough....033	-	-	-
Streptococcal sore throat, scarlatina, and erysipelas....034-035	-	-	0.0
Meningococcal infection....036	3	0.1	0.1
Septicemia....038	176	5.0	8.1
Acute poliomyelitis....045	-	-	-
Measles....055	-	-	-
Viral hepatitis....070	25	0.7	0.6
Syphillis....090-097	-	-	0.0
All other infectious and parasitic diseases[b]....001-003,005,020-032,037,039-041,*042-*044,046-054, ...056-066,071-088,098-139	198	5.7	7.9
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues....140-208	6,126	176.6	196.1
Malignant neoplasms of lip, oral cavity, and pharynx....140-149	84	2.4	3.4
Malignant neoplasms of digestive organs and peritoneum....150-159	1,415	40.8	47.7
Malignant neoplasms of respiratory and intrathoracic organs....160-165	1,807	52.1	54.8
Malignant neoplasm of breast....174-175	504	14.5	17.0
Malignant neoplasms of genital organs....179-187	636	18.3	21.1
Malignant neoplasms of urinary organs....188-189	256	7.4	8.2
Malignant neoplasms of all other and unspecified sites....170-173,190-199	723	20.8	25.3
Leukemia....204-208	244	7.0	7.4
Other malignant neoplasms of lymphatic and hematopoietic tissues....200-203	335	9.7	11.2
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature....210-239	95	2.7	2.7
Diabetes mellitus....250	482	13.9	15.6
Nutritional deficiencies....260-269	37	1.1	1.2
Anemias....280-285	48	1.4	1.5
Meningitis....320-322	31	0.9	0.5
Alzheimer's disease....331.0	192	5.5	NA
Parkinson's disease....332	96	2.8	NA
Multiple sclerosis....340	24	0.7	NA
Major cardiovascular diseases....390-448	10,760	310.2	397.0
Diseases of heart....390-398,402,404-429	8,533	246.0	313.4
Rheumatic fever and rheumatic heart disease....390-398	86	2.5	2.5
Hypertensive heart disease....402	160	4.6	8.3
Hypertensive heart and renal disease....404	13	0.4	1.1
Ischemic heart disease....410-414	6,038	174.1	211.0
Acute myocardial infarction....410	2,598	74.9	104.0
Other acute and subacute forms of ischemic heart disease....411	265	7.6	1.5
Angina pectoris....413	4	0.1	0.5
Old myocardial infarction and other forms of chronic ischemic heart disease....412,414	3,175	91.5	105.0

Other diseases of endocardium....424	133	3.2	4.6
All other forms of heart disease....415-423,425-429	2,098	60.5	85.8
Hypertension with or without renal disease....401,403	91	2.6	3.3
Cerebrovascular diseases....430-438	1,512	43.6	61.3
Intracerebral and other intracranial hemorrhage....431-432	246	7.1	8.1
Cerebral thrombosis and unspecified occlusion of cerebral arteries....434.0,434.9	164	4.7	8.9
All other and late effects of cerebrovascular diseases....430,433,435-438	1,093	31.5	44.0
Atherosclerosis....440	319	9.2	9.5
Other diseases of arteries, arterioles, and capillaries....441-448	245	7.1	9.5
Acute bronchitis and bronchiolitis....466	4	0.1	0.2
Pneumonia and influenza....480-487	868	25.0	28.8
Pneumonia....480-486	853	24.6	28.6
Influenza....487	15	0.4	0.3
Chronic obstructive pulmonary diseases and allied conditions....490-496	1,425	41.1	32.2
Bronchitis, chronic and unspecified....490-491	49	1.4	1.4
Emphysema....492	340	9.8	6.0
Asthma....493	84	2.4	1.7
Other chronic obstructive pulmonary diseases and allied conditions....494-496	952	27.4	23.2
Ulcer of stomach and duodenum....531-533	71	2.0	2.4
Appendicitis....540-543	3	0.1	0.2
Hernia of abdominal cavity and intestinal obstruction without mention of hernia....550-553,560	68	2.0	2.3
Chronic liver disease and cirrhosis....571	353	10.2	10.7
Cholelithiasis and other disorders of gallbladder....574-575	31	0.9	1.3
Nephritis, nephrotic syndrome, and nephrosis....580-589	229	6.6	9.5
Acute glomerulonephritis and nephrotic syndrome....580-581	2	0.0	0.2
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified....582-583,587	14	0.4	0.6
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause....584-586,588-589	209	6.0	8.7
Infections of kidney....590	15	0.4	0.8
Hyperplasia of prostate....600	4	0.1	0.2
Complications of pregnancy, childbirth, and the puerperium....630-676	2	0.0	0.1
Pregnancy with abortive outcome....630-638	-	-	0.0
Other complications of pregnancy, childbirth, and the puerperium....640-676	2	0.0	0.1
Congenital anomalies....740-759	208	6.0	5.0
Certain conditions originating in the perinatal period....760-779	258	7.4	7.6
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome....767-769	50	1.4	1.8
Other conditions originating in the perinatal period....650-766,770-779	208	6.0	5.7
Symptoms, signs, and ill-defined conditions....780-799	373	10.8	12.9
All other diseases....Residual	1,826	52.6	66.4[c]
Accidents and adverse effects....E800-E949	1,567	45.2	39.0
Motor vehicle accidents....E810-E825	912	26.3	20.1
All other accidents and adverse effects....E800-E807,E826-E949	655	18.9	18.9
Suicide....E950-E959	687	19.8	12.7
Homicide and legal intervention....E960-E978	287	8.3	8.5
All other external causes....E980-E999	46	1.3	1.2

[a] Rates per 100,000 population. The U.S. data are provisional.
[b] Beginning in January 1987 includes data for the newly introduced categories *042-*044 (HIV infection)
[c] Includes mortality from Alzheimer's disease, Parkinson's disease and multiple sclerosis
-: Quantity zero
0.0: Quantity equal or less than 0.05

TABLE 9-10

LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE
ARIZONA, 1987

Cause of Death	Total	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	26,670	343	764	392	408	193	67	151	14,746	877	462	5,295	922	159	1,213	678
Heart Disease	8,533	50	263	88	132	63	20	39	4,825	300	111	1,762	280	46	368	186
Cancer	6,126	54	159	71	91	45	15	35	3,431	227	76	1,190	204	44	310	174
Accidents	1,567	81	44	77	18	11	8	7	735	47	77	271	79	8	52	52
Motor Vehicle	912	52	34	47	12	7	6	2	412	27	45	149	55	4	33	27
Other	655	29	10	30	6	4	2	5	323	20	32	122	24	4	19	25
Stroke	1,512	6	47	17	27	8	7	7	863	44	20	298	39	13	82	34
Chronic Obstructive Pulmonary Disease	1,425	6	32	13	28	8	4	10	798	49	8	280	56	5	83	45
Influenza and Pneumonia	868	12	23	13	6	4	1	2	506	28	24	155	24	3	43	24
Suicide	687	12	16	20	14	4	4	7	364	27	14	142	26	1	28	8
Diabetes	482	14	18	5	11	9	3	2	243	12	11	90	25	6	24	9
Infectious/Parasitic Diseases[a]	454	13	12	6	5	3	1	3	257	10	3	109	10	5	9	8
Symptoms and Ill-Defined Conditions	373	22	7	7	7	8	1	15	200	16	11	35	15	2	14	13
Atherosclerosis	319	2	5	4	5	1	-	1	134	17	2	100	13	1	21	13
Diseases of the Arteries	305	-	11	6	5	3	-	4	162	10	3	57	10	1	21	12
Alcoholism	294	9	8	6	4	2	-	1	137	10	6	80	15	-	10	6
Homicide	287	7	5	9	2	-	-	5	177	8	7	40	10	2	6	9
Perinatal Conditions	258	3	7	4	1	-	-	1	166	6	8	40	8	5	4	5
Congenital Anomalies	208	6	5	6	1	1	-	-	115	2	13	35	9	1	8	6
All Other Causes	2,972	46	102	40	51	23	3	12	1,633	64	68	611	99	16	130	74

[a] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics

TABLE 9-11

RATES[a] FOR THE LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE, ARIZONA, UNITED STATES: 1987

Cause of Death	U.S.[b]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	874.0	768.8	549.8	762.1	426.8	1,017.0	781.9	696.8	1,067.9	740.7	1,106.2	610.5	803.4	860.4	545.1	1,276.5	758.0
Heart Disease	313.4	246.0	80.2	262.3	95.8	329.0	255.2	208.0	275.8	242.4	378.4	146.7	267.3	261.3	157.7	387.3	208.0
Cancer	196.1	176.6	86.6	158.6	77.3	226.0	182.3	156.0	247.5	172.3	286.3	100.4	180.6	190.4	150.8	326.2	194.5
Stroke	61.3	43.6	9.6	46.9	18.5	67.3	32.4	72.8	49.5	43.4	55.5	26.4	45.2	36.4	44.6	86.3	38.0
Accidents	39.0	45.2	129.9	43.9	83.8	45.9	44.6	83.2	49.5	36.9	59.3	101.8	41.1	73.7	27.4	54.7	58.2
Motor Vehicles	20.1	26.3	83.4	33.9	51.2	29.9	28.4	62.4	14.1	20.7	34.1	59.5	22.6	51.3	13.7	34.7	30.2
Other	18.9	18.9	46.5	10.0	32.7	15.0	16.2	20.8	35.4	16.2	25.2	42.3	18.5	22.4	13.7	20.0	28.0
Chronic Obstructive Pulmonary Disease	32.2	41.1	9.6	31.9	14.2	69.8	32.4	41.6	70.7	40.1	61.8	10.6	42.5	52.3	17.1	87.4	50.3
Influenza and Pneumonia	28.8	25.0	19.2	22.9	14.2	15.0	16.2	10.4	14.1	25.4	35.3	31.7	23.5	22.4	10.3	45.3	26.8
Infectious/Parasitic Diseases[c]	18.2	13.1	20.8	12.0	6.5	12.5	12.2	10.4	21.2	12.9	12.6	4.0	16.5	9.3	17.1	9.5	8.9
Diabetes	15.6	13.9	22.4	18.0	5.4	27.4	36.5	31.2	14.1	12.2	15.1	14.5	13.7	23.3	20.6	25.3	10.6
Symptoms and Ill-Defined Conditions	12.9	10.8	35.3	7.0	7.6	17.4	32.4	10.4	106.1	10.0	20.2	14.5	5.3	14.0	6.9	14.7	14.5
Suicide	12.7	19.8	19.2	16.0	21.8	34.9	16.2	41.6	49.5	18.3	34.1	18.5	21.5	24.3	3.4	29.5	8.9
Alcoholism	NA	8.5	14.4	8.0	6.5	10.0	8.1	-	7.1	6.9	12.6	7.9	12.1	14.0	-	10.5	6.7
Atherosclerosis	9.5	8.8	-	11.0	6.5	12.5	12.2	-	28.3	8.1	12.6	4.0	8.6	9.3	3.4	22.1	13.4
Other Diseases of the Arteries	9.5	8.8	-	11.0	6.5	12.5	12.2	-	28.3	8.1	12.6	4.0	8.6	9.3	3.4	22.1	13.4
Homicide	8.5	8.3	11.2	5.0	9.8	5.0	-	-	35.4	8.9	10.1	9.3	6.1	9.3	6.9	6.3	10.1
Perinatal Conditions	7.6	7.4	4.8	7.0	4.4	2.5	-	-	7.1	8.3	7.6	10.5	6.1	7.5	17.1	4.2	5.6
Congenital Anomalies	5.0	6.0	9.6	5.0	6.5	2.5	4.1	-	-	5.8	9.3	17.2	5.3	8.4	3.4	8.4	6.7
All Other Causes	103.7	85.7	73.7	101.7	43.5	124.0	93.2	31.2	84.9	82.0	80.7	89.9	92.7	92.4	54.8	136.8	82.7

[a] Number of deaths per 100,000 population

[b] Provisional

[c] Beginning in January 1987 includes data for the newly introduced category numbers 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 9-12

PERCENT OF TOTAL DEATHS FOR THE LEADING CAUSES OF MORTALITY BY COUNTY OF RESIDENCE
ARIZONA, UNITED STATES: 1987

Cause of Death	U.S.[a]	Arizona	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma
ALL CAUSES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Heart Disease	35.9	32.0	14.6	34.4	22.4	32.4	32.6	29.9	25.8	32.7	34.2	24.0	33.3	30.4	28.9	30.3	27.4
Cancer	22.4	23.0	15.7	20.8	18.1	22.3	23.3	22.4	23.2	23.3	25.9	16.5	22.5	22.1	27.7	25.6	25.7
Stroke	7.0	5.7	1.7	6.2	4.3	6.6	4.1	10.4	4.6	5.9	5.0	4.3	5.6	4.2	8.2	6.8	5.0
Accidents	4.5	5.9	23.7	5.8	19.7	4.4	5.7	12.0	4.6	5.0	5.4	16.6	5.1	8.6	5.0	4.3	7.7
Motor Vehicles	2.3	3.4	15.2	4.5	12.0	2.9	3.6	9.0	1.3	2.8	3.1	9.7	2.8	6.0	2.5	2.7	4.0
Other	2.2	2.5	8.5	1.3	7.7	1.5	2.1	3.0	3.3	2.2	2.3	6.9	2.3	2.6	2.5	1.6	3.7
Chronic Obstructive Pulmonary Disease	3.7	5.3	1.7	4.2	3.3	6.9	4.1	6.0	6.6	5.4	5.6	1.7	5.3	6.1	3.1	6.8	6.6
Influenza and Pneumonia	3.3	3.3	3.5	3.0	3.3	1.5	2.1	1.5	1.3	3.4	3.2	5.2	2.9	2.6	1.9	3.5	3.5
Infectious/Parasitic Diseases[b]	2.1	1.7	3.8	1.6	1.5	1.2	1.6	1.5	2.0	1.8	1.1	0.6	2.1	1.1	3.1	0.7	1.2
Diabetes	1.8	1.8	4.1	2.4	1.3	2.7	4.7	4.5	1.3	1.6	1.4	2.4	1.7	2.7	3.8	2.0	1.3
Symptoms and Ill-Defined Conditions	1.5	1.4	6.4	0.9	1.8	1.7	4.1	1.5	9.9	1.4	1.8	2.4	0.7	1.6	1.3	1.2	1.9
Suicide	1.5	2.6	3.5	2.1	5.1	3.4	2.1	6.0	4.6	2.5	3.1	3.0	2.7	2.8	0.6	2.3	1.2
Alcoholism	NA	1.1	2.6	1.0	1.5	1.0	1.0	-	0.7	0.9	1.1	1.3	1.5	1.6	-	0.8	0.9
Atherosclerosis	1.1	1.2	0.6	0.7	1.0	1.2	0.5	-	0.7	0.9	1.9	0.4	1.9	1.4	0.6	1.7	1.9
Other Diseases of the Arteries	1.1	1.1	-	1.4	1.5	1.2	1.6	-	2.6	1.1	1.1	0.6	1.1	1.1	0.6	1.7	1.8
Homicide	1.0	1.1	2.0	0.7	2.3	0.5	-	-	3.3	1.2	0.9	1.5	0.8	1.1	1.3	0.5	1.3
Perinatal Conditions	0.9	1.0	0.9	0.9	1.0	0.2	-	-	0.7	1.1	0.7	1.7	0.8	0.9	3.1	0.3	0.7
Congenital Anomalies	0.6	0.8	1.7	0.7	1.5	0.2	0.5	-	-	0.8	0.2	2.8	0.7	1.0	0.6	0.7	0.9
All Other Causes	11.9	11.1	13.4	13.4	10.2	12.5	11.9	4.5	7.9	11.1	7.3	14.7	11.6	10.7	10.1	10.7	10.9

[a] Provisional

[b] Beginning in January 1987 includes data for the newly introduced category number 042-044 (HIV infection), following the redefinition by the National Center for Health Statistics.

TABLE 9-13

FIVE LEADING CAUSES OF DEATH* AMONG CHILDREN (1 - 14 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Accidents	54.3	50.2	54.7	40.6	45.7
	Motor vehicle	16.8	28.2	25.0	17.1	21.6
	Drowning	10.1	11.3	10.1	10.7	11.1
	Other accidents	27.4	10.7	19.6	12.8	13.0
	Malignant neoplasms	11.5	16.9	9.5	10.2	10.5
	Congenital anomalies	5.8	7.3	5.4	5.3	5.6
	Diseases of heart	1.9	4.0	1.8	-	3.7
	Suicide	0.5	-	1.8	0.5	3.7
	(Number of all deaths)	(208)	(177)	(168)	(187)	(162)
HISPANIC	Accidents	58.7	47.7	60.7	49.1	44.3
	Motor Vehicle	32.0	16.4	26.8	24.5	24.6
	Drowning	10.7	16.4	23.2	15.1	14.8
	Other accidents	16.0	14.9	10.7	9.5	4.9
	Malignant neoplasms	6.7	9.0	3.6	9.4	11.5
	Congenital anomalies	4.0	9.0	5.4	9.4	11.5
	Homicide	-	9.0	12.5	5.7	6.6
	Infectious disease	12.0	6.0	1.8	1.9	6.6
	(Number of all deaths)	(75)	(67)	(56)	(53)	(61)
BLACK	Accidents	46.2	42.8	44.4	35.0	33.3
	Motor vehicle	-	9.5	33.3	20.0	33.3
	Drowning	23.1	19.0	11.1	-	-
	Other Accidents	23.1	14.3	-	15.0	-
	Homicide	7.7	5.2	-	20.0	22.2
	Diseases of heart	-	4.8	-	-	11.1
	Congenital anomalies	23.1	4.8	11.1	-	11.1
	(Number of all deaths)	(13)	(21)	(9)	(20)	(9)
NATIVE AMERICAN	Accidents	60.0	53.9	45.7	62.5	60.0
	Motor Vehicle	26.7	32.8	28.6	35.0	34.3
	Drowning	8.3	8.6	-	7.5	8.6
	Other accidents	25.0	12.5	17.1	20.0	17.1
	Malignant neoplasms	1.7	3.4	8.6	-	11.4
	Diseases of heart	-	-	8.6	7.5	5.7
	Pneumonia and influenza	8.3	8.6	-	-	2.9
	Chronic obstructive pulmonary disease	-	1.7	2.9	-	2.9
	(Number of all deaths)	(60)	(58)	(35)	(40)	(35)
TOTAL: ALL ETHNIC GROUPS #	Accidents	55.8	50.0	54.6	49.2	47.4
	Motor vehicle	21.0	25.3	26.7	23.0	25.0
	Drowning	10.4	12.7	11.4	11.7	11.4
	Other accidents	24.4	12.0	16.5	14.5	11.0
	Malignant neoplasms	8.7	12.0	8.1	8.7	10.3
	Congenital anomalies	5.6	6.2	5.5	6.9	6.6
	Diseases of heart	1.7	2.5	2.2	1.0	4.4
	Homicide	1.7	4.3	5.1	6.1	4.0
	(Number of all deaths)	(357)	(324)	(273)	(275)	(272)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups

TABLE 9-14

FIVE LEADING CAUSES OF DEATH* AMONG ADOLESCENTS (15 - 19 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Accidents	61.2	59.9	58.4	48.9	51.4
	Motor vehicle	39.4	42.7	41.6	44.9	37.0
	Other accidents	21.8	17.2	16.8	11.4	14.4
	Suicide	9.2	15.9	12.9	18.4	23.3
	Malignant neoplasms	4.2	4.5	7.3	8.2	6.8
	Homicide	8.5	3.2	4.5	3.8	5.5
	Congenital anomalies	2.1	1.3	1.7	2.5	3.4
	(Number of all deaths)	(142)	(157)	(178)	(158)	(146)
HISPANIC	Accidents	55.3	52.4	51.8	61.7	49.0
	Motor Vehicle	31.9	34.4	37.0	55.3	37.7
	Other accidents	23.4	18.0	14.8	6.4	11.3
	Suicide	-	6.6	9.3	12.8	21.8
	Homicide	4.3	4.5	20.4	8.5	16.4
	Malignant neoplasms	4.3	1.6	7.4	4.3	3.6
	Congenital anomalies	4.3	1.6	1.9	-	1.8
	(Number of all deaths)	(47)	(61)	(54)	(47)	(55)
NATIVE AMERICAN	Accidents	68.2	64.0	56.4	55.5	69.6
	Motor vehicle	45.5	44.0	41.0	51.1	56.5
	Other accidents	22.7	20.0	15.4	4.4	13.1
	Suicide	6.8	8.0	12.8	8.9	10.9
	Homicide	9.1	10.0	12.8	15.6	4.3
	Malignant neoplasms	2.3	-	-	4.4	2.2
	(Number of all deaths)	(44)	(50)	(39)	(45)	(46)
TOTAL: ALL ETHNIC GROUPS #	Accidents	61.6	58.0	56.8	55.6	53.4
	Motor vehicle	39.7	40.4	40.5	47.1	39.9
	Other accidents	21.9	17.6	16.3	8.5	13.5
	Suicide	6.8	12.5	11.8	15.7	20.6
	Homicide	5.5	8.8	11.8	7.2	7.9
	Malignant neoplasms	6.3	2.2	4.8	6.5	5.5
	Congenital anomalies	2.1	1.1	1.4	1.5	2.4
	(Number of all deaths)	(237)	(272)	(289)	(261)	(253)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups. Specific causes of three deaths to Black adolescents in Arizona in 1987 are not shown separately

TABLE 9-15

FIVE LEADING CAUSES OF DEATH* AMONG YOUNG ADULTS (20 - 44 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Accidents	32.2	30.1	34.4	32.9	29.5
	Motor vehicle	19.2	17.7	24.4	22.8	19.2
	Other accidents	13.0	12.4	10.0	10.1	10.3
	Suicide	9.5	14.2	14.3	15.9	17.3
	Malignant neoplasms	15.6	14.8	14.0	13.6	15.0
	Diseases of heart	9.7	11.5	8.7	9.2	9.3
	Homicide	4.9	6.3	7.7	5.8	5.4
	(Number of all deaths)	(877)	(1005)	(1204)	(1320)	(1457)
HISPANIC	Accidents	37.7	33.9	38.6	30.7	32.9
	Motor Vehicle	27.2	22.7	29.7	22.8	23.4
	Other accidents	10.5	11.2	8.9	7.9	9.5
	Homicide	9.2	10.0	15.7	15.7	17.1
	Suicide	5.3	11.2	12.3	11.2	12.1
	Malignant neoplasms	11.0	8.8	7.6	10.9	8.1
	Diseases of heart	6.1	8.1	6.8	6.0	4.6
	(Number of all deaths)	(228)	(260)	(236)	(267)	(346)
BLACK	Accidents	16.3	17.4	16.9	19.0	23.9
	Motor vehicle	7.4	5.8	9.2	11.1	9.1
	Other Accidents	8.9	11.4	7.7	7.9	14.8
	Homicide	30.9	33.7	18.5	17.5	18.2
	Malignant neoplasms	7.4	5.8	15.4	4.8	11.4
	Diseases of heart	12.3	8.1	9.2	12.7	9.1
	Pneumonia and influenza	2.5	1.2	1.5	1.6	4.5
	(Number of all deaths)	(81)	(86)	(65)	(63)	(88)
NATIVE AMERICAN	Accidents	46.2	41.0	39.2	42.5	49.5
	Motor vehicle	31.3	28.9	27.7	30.4	37.4
	Other accidents	14.9	12.1	11.5	12.1	12.1
	Suicide	4.8	8.2	8.3	10.1	9.8
	Homicide	5.3	5.9	7.9	9.7	7.9
	Alcoholism	12.5	12.9	17.4	10.5	7.2
	Malignant neoplasms	3.8	5.8	2.8	2.4	5.9
	(Number of all deaths)	(208)	(256)	(253)	(247)	(305)
TOTAL: ALL ETHNIC GROUPS #	Accidents	34.1	31.8	34.9	33.4	32.6
	Motor vehicle	21.5	19.7	24.9	23.4	21.9
	Other accidents	12.6	12.1	10.0	10.0	10.7
	Suicide	7.7	12.1	13.0	14.3	14.8
	Malignant neoplasms	12.7	12.1	11.5	11.6	12.6
	Homicide	7.2	8.2	9.2	8.1	8.1
	Disease of heart	8.2	9.6	7.7	8.5	8.0
	(Number of all deaths)	(1398)	(1614)	(1768)	(1908)	(2214)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups

TABLE 9-16

FIVE LEADING CAUSES OF DEATH* AMONG MIDDLE AGED ADULTS (45-64 YEARS) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Malignant neoplasms	23.7	29.7	33.0	35.7	35.9
	Diseases of heart	32.5	32.9	31.9	29.4	29.4
	Chronic obstructive pulmonary disease	5.0	3.6	6.1	5.5	5.3
	Accidents	6.5	4.1	4.2	4.6	4.0
	Motor vehicle	3.4	1.8	2.3	2.9	2.4
	Other accidents	3.1	2.3	1.9	1.7	1.6
	Suicide	2.5	3.1	3.6	3.4	3.6
	(Number of all deaths)	(3016)	(3311)	(3873)	(3923)	(4042)
HISPANIC	Malignant neoplasms	17.2	23.6	25.6	25.5	30.5
	Diseases of heart	29.6	29.4	24.4	28.9	23.4
	Alcoholism	8.0	9.6	6.9	5.4	5.6
	Accidents	7.8	7.0	9.7	7.2	5.1
	Motor vehicle	4.6	3.9	5.5	4.6	3.0
	Other accidents	3.2	3.1	4.2	2.6	2.1
	Diabetes	4.9	3.3	2.3	4.1	4.3
	(Number of all deaths)	(412)	(513)	(434)	(462)	(472)
BLACK	Malignant neoplasms	17.7	23.6	24.0	31.0	34.1
	Diseases of heart	23.4	32.6	32.9	31.6	31.2
	Accidents	3.2	4.2	4.8	3.2	5.4
	Motor vehicle	0.7	2.1	1.4	1.3	1.8
	Other accidents	2.5	2.1	3.4	1.9	3.6
	Chronic obstructive pulmonary disease	4.4	1.4	2.1	3.9	3.5
	Homicide	5.7	4.2	6.2	0.7	2.9
	(Number of all deaths)	(158)	(144)	(146)	(155)	(170)
NATIVE AMERICAN	Accidents	17.8	19.1	16.9	13.2	22.1
	Motor vehicle	8.9	9.3	8.7	6.4	7.3
	Other accidents	8.9	9.8	8.2	6.8	14.8
	Diseases of heart	14.1	12.4	16.4	14.6	16.9
	Diabetes	3.6	3.6	6.8	12.3	11.3
	Malignant neoplasms	8.3	9.8	10.1	15.5	8.9
	Alcoholism	13.0	13.5	13.6	10.5	6.9
	(Number of all deaths)	(192)	(193)	(207)	(220)	(248)
TOTAL: ALL ETHNIC GROUPS #	Malignant neoplasms	30.9	31.6	30.5	33.7	34.0
	Diseases of heart	22.0	27.8	31.0	28.7	28.3
	Chronic obstructive pulmonary disease	4.5	3.2	5.3	4.8	4.8
	Accidents	7.1	5.2	5.4	4.3	4.7
	Motor vehicle	3.7	2.5	2.9	2.4	2.7
	Other accidents	3.4	2.7	2.5	1.9	2.0
	Suicide	2.4	2.6	2.4	2.6	3.4
	(Number of all deaths)	(3836)	(4171)	(4672)	(4778)	(4953)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups

TABLE 9-17

FIVE LEADING CAUSES OF DEATH* AMONG ELDERLY (65 YEARS AND OLDER) BY ETHNICITY, ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Diseases of heart	41.5	41.8	41.2	38.8	38.0
	Malignant neoplasms	16.3	18.7	20.7	22.3	22.7
	Cerebrovascular disease	13.1	12.2	8.9	7.8	7.2
	Chronic obstructive pulmonary disease	4.7	3.2	6.4	6.7	6.8
	Pneumonia and influenza	3.5	3.3	3.7	4.0	4.0
	(Number of all deaths)	(7180)	(8507)	(12027)	(15063)	(16468)
HISPANIC	Diseases of heart	38.1	38.5	37.9	37.3	37.0
	Malignant neoplasms	15.4	18.2	18.6	22.2	21.0
	Cerebrovascular disease	11.7	12.3	8.6	7.0	6.5
	Diabetes	3.7	2.6	3.7	5.5	5.1
	Pneumonia and influenza	3.7	2.6	3.7	4.4	4.7
	(Number of all deaths)	(712)	(940)	(881)	(939)	(1147)
BLACK	Diseases of heart	37.6	37.7	37.7	34.9	40.8
	Malignant neoplasms	17.8	18.2	17.6	27.7	23.3
	Cerebrovascular disease	10.4	12.7	8.8	8.6	8.4
	Pneumonia and influenza	5.9	3.8	3.3	2.9	4.5
	Diabetes	5.4	2.5	5.1	3.6	2.6
	(Number of all deaths)	(202)	(236)	(273)	(278)	(309)
NATIVE AMERICAN	Diseases of heart	21.3	14.2	25.9	25.7	26.8
	Malignant neoplasms	6.3	11.4	10.2	11.3	14.2
	Pneumonia and influenza	13.0	11.4	10.5	8.1	8.0
	Accidents	5.9	4.6	3.8	4.6	6.4
	Motor vehicle	4.2	2.8	3.0	1.3	1.6
	Other accidents	1.7	1.8	0.8	3.3	4.8
	Diabetes	1.7	5.0	8.1	7.1	5.4
	(Number of all deaths)	(239)	(281)	(371)	(397)	(373)
TOTAL: ALL ETHNIC GROUPS #	Diseases of heart	40.6	40.6	40.6	38.3	37.7
	Malignant neoplasms	16.0	18.5	20.2	22.1	22.4
	Cerebrovascular disease	12.8	12.1	8.7	7.8	7.2
	Chronic obstructive pulmonary disease	4.5	2.9	6.0	6.3	6.4
	Pneumonia and influenza	3.9	3.7	3.9	4.1	4.1
	(Number of all deaths)	(8439)	(9984)	(13580)	(16723)	(18350)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups

TABLE 9-18

FIVE LEADING CAUSES OF DEATH* BY ETHNICITY, (ALL AGES), ARIZONA, SELECTED YEARS, 1970 - 1987

ETHNICITY	LEADING CAUSES OF DEATH	Proportional mortality (%) 1970	1975	1980	1985	1987
WHITE**	Diseases of heart	34.3	35.4	35.4	33.9	32.7
	Malignant neoplasms	17.6	20.6	22.3	23.7	23.4
	Cerebrovascular disease	9.3	9.0	7.1	6.3	5.8
	Chronic obstructive pulmonary disease	4.4	3.0	5.7	6.0	5.4
	Accidents	7.3	5.9	5.8	4.8	5.6
	(Number of all deaths)	(11554)	(13234)	(17833)	(20893)	(22653)
HISPANIC	Diseases of heart	25.5	26.8	25.4	27.4	25.1
	Malignant neoplasms	13.2	16.1	16.7	19.1	18.9
	Accidents	13.2	10.7	12.4	10.1	10.0
	Cerebrovascular disease	7.8	7.7	5.6	4.7	4.8
	Diabetes	3.1	2.2	2.4	3.8	3.8
	(Number of all deaths)	(1623)	(2001)	(1798)	(2002)	(2227)
BLACK	Diseases of heart	24.8	27.6	28.5	27.9	30.3
	Malignant neoplasms	14.1	15.7	17.1	22.9	22.3
	Accidents	6.8	7.0	6.5	6.8	6.6
	Cerebrovascular disease	8.3	8.3	6.0	5.2	5.6
	Homicide	7.3	7.6	5.4	3.6	4.1
	(Number of all deaths)	(495)	(529)	(551)	(559)	(627)
NATIVE AMERICAN	Accidents	27.0	24.8	20.7	20.1	25.0
	Diseases of Heart	10.2	8.3	14.8	15.1	15.0
	Malignant Neoplasms	4.9	7.4	7.2	8.5	9.1
	Diabetes	1.6	2.7	4.8	5.7	5.1
	Alcoholism	6.3	6.9	8.1	5.3	4.3
	(Number of all deaths)	(859)	(931)	(988)	(1021)	(1088)
TOTAL: ALL ETHNIC GROUPS #	Diseases of heart	31.7	32.7	33.4	32.4	32.0
	Malignant neoplasms	16.2	19.2	20.9	22.7	23.0
	Cerebrovascular disease	8.9	8.6	6.7	6.1	5.7
	Accidents	9.1	7.4	7.2	5.9	5.9
	Chronic obstructive pulmonary disease	3.8	2.6	5.1	5.3	5.3
	(Number of all deaths)	(14857)	(16964)	(21226)	(24577)	(26670)

* Leading causes are based on 1987 vital records
** Includes only whites of non-Hispanic origin
\# Includes other ethnic groups

MARRIAGE AND DIVORCE STATISTICS

TABLE 10-1

MARRIAGES BY COUNTY OF OCCURRENCE*
ARIZONA, 1950-87

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987
ARIZONA	20,031	21,831	10,153	12,113	19,069	26,558	30,223	35,723	36,025	36,207
Apache	79	93	75	73	103	146	165	181	217	195
Cochise	237	414	352	408	681	874	1,072	992	981	878
Coconino	384	408	247	331	561	645	775	656	855	940
Gila	282	327	209	240	391	469	512	403	418	419
Graham	120	106	119	124	208	292	317	284	327	275
Greenlee	80	80	56	55	103	150	85	53	53	59
La Paz	NA	NA	NA	NA	NA	NA	NA	186	193	145
Maricopa**	3,866	4,702	4,640	6,041	10,193	13,022	16,134	21,860	21,340	21,003
Mohave	599	934	67	77	121	223	407	698	788	1,056
Navajo	259	277	206	268	328	420	581	548	504	486
Pima	1,406	1,792	1,818	2,433	3,933	5,252	5,728	5,692	6,325	6,677
Pinal	1,065	866	531	528	746	791	947	923	847	895
Santa Cruz	494	517	262	282	364	316	311	350	356	311
Yavapai	310	290	210	277	382	465	610	887	889	879
Yuma	10,850	11,025	1,361	976	955	3,493	2,579	2,010	1,932	1,989

* Marriages recorded unless otherwise indicated
** Marriage licenses issued

TABLE 10-2

MARRIAGE RATES* BY COUNTY OF OCCURRENCE
ARIZONA, UNITED STATES: 1950-87

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987
U.S.	11.1	9.3	8.5	9.3	10.6	10.0	10.9	10.2	10.0	10.0**
ARIZONA	26.7	22.1	7.8	7.6	10.8	11.9	11.1	11.2	10.7	10.4
Apache	2.8	3.2	2.5	2.1	3.2	3.6	3.2	3.2	3.6	3.1
Cochise	7.5	10.0	6.4	7.2	11.0	11.8	12.4	10.3	10.0	8.8
Coconino	16.1	12.9	5.9	6.7	11.6	9.9	10.3	7.6	9.6	10.2
Gila	11.7	13.2	8.1	8.6	13.4	14.4	13.8	10.6	10.5	10.4
Graham	9.2	7.9	8.5	7.9	12.5	14.5	13.6	12.2	13.3	11.1
Greenlee	6.2	6.6	4.9	5.2	10.0	12.6	7.5	6.1	5.5	6.1
La Paz	-	-	-	-	-	-	-	12.9	13.7	10.2
Maricopa	11.7	9.9	7.0	7.1	10.5	10.7	10.7	12.1	11.2	10.6
Mohave	70.4	113.9	8.7	5.1	4.7	6.0	7.3	9.6	10.2	13.3
Navajo	8.8	8.4	5.4	6.1	6.9	7.2	8.5	7.6	6.8	6.4
Pima	10.0	9.2	6.8	7.8	11.2	11.9	10.9	9.1	9.8	10.1
Pinal	24.7	16.8	8.5	8.3	10.9	9.0	10.4	9.2	8.2	8.4
Santa Cruz	52.9	51.7	24.2	20.9	26.1	18.3	15.2	12.9	12.9	10.7
Yavapai	12.4	10.9	7.3	8.5	10.3	9.5	9.0	10.1	9.7	9.2
Yuma	387.4	307.1	29.4	17.5	15.7	49.7	28.5	22.3	22.0	22.2

* Per 1,000 estimated midyear population
** Preliminary

TABLE 10-3

MARRIAGES BY COUNTY OF OCCURRENCE BY MONTH*
ARIZONA, 1987

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Apache	12	14	11	16	19	20	20	22	26	15	9	11	195
Cochise	69	57	51	89	69	81	99	55	68	77	82	81	878
Coconino	57	59	53	90	52	135	80	108	87	76	61	82	940
Gila	30	28	29	34	27	45	40	37	42	34	33	40	419
Graham	17	16	24	25	25	32	30	21	16	18	24	27	275
Greenlee	2	3	4	7	7	6	5	7	4	3	6	5	59
La Paz **	10	20	19	12	20	12	13	9	8	6	6	10	145
Maricopa **	1,514	1,403	1,927	1,854	2,032	2,209	1,710	1,272	1,558	1,933	1,289	2,302	21,003
Mohave	69	68	77	76	91	85	102	95	91	89	112	101	1,056
Navajo	41	35	27	34	38	48	65	39	52	46	38	23	486
Pima	496	484	490	558	618	637	598	498	536	585	458	719	6,677
Pinal	66	75	87	91	79	94	68	63	66	75	58	73	895
Santa Cruz	20	24	17	28	36	28	28	22	27	29	33	19	311
Yavapai	41	58	74	65	75	105	100	79	77	81	56	68	879
Yuma	161	187	196	184	149	174	147	139	138	169	143	202	1,989
MONTHLY TOTAL	2,605	2,531	3,086	3,163	3,337	3,711	3,105	2,466	2,796	3,236	2,408	3,763	36,207

* Marriages recorded unless otherwise indicated
** Marriage licenses issued

TABLE 10-4

DISSOLUTIONS OF MARRIAGE BY COUNTY OF OCCURRENCE
ARIZONA, 1950-87

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987
ARIZONA	4,062	3,581	4,780	8,575	13,298	17,577	19,858	21,157	23,062	23,760
Apache	43	23	24	27	34	35	82	110	136	88
Cochise	131	178	156	286	403	657	666	669	802	713
Coconino	81	48	141	185	280	380	432	578	458	520
Gila	117	129	86	167	219	315	259	239	235	233
Graham	59	54	50	90	131	192	157	203	133	167
Greenlee	54	60	32	39	55	84	52	35	19	39
La Paz	-	-	-	-	-	-	-	77	74	64
Maricopa	2,483	1,581	2,724	5,448	8,023	9,826	11,187	12,626	14,409	15,185
Mohave	44	88	26	77	126	342	457	563	558	519
Navajo	75	66	64	194	140	224	212	258	360	236
Pima	580	883	987	1,248	2,703	3,772	4,141	3,911	3,992	4,086
Pinal	127	141	142	308	449	531	744	622	644	618
Santa Cruz	27	12	22	51	42	73	106	84	92	109
Yavapai	119	114	137	174	216	351	543	523	544	619
Yuma	122	204	189	281	477	795	820	659	606	564

TABLE 10-5

DISSOLUTIONS OF MARRIAGE RATES* BY COUNTY OF OCCURRENCE ARIZONA, UNITED STATES: 1950-87

County	1950	1955	1960	1965	1970	1975	1980	1985	1986	1987
U.S.	2.6	2.3	2.2	2.5	3.5	4.8	5.2	5.0	5.0	4.8**
ARIZONA	5.4	3.7	3.7	5.4	7.5	7.9	7.3	6.6	6.9	6.8
Apache	1.5	0.8	0.8	0.8	1.1	0.9	1.6	1.9	2.2	1.4
Cochise	4.2	4.3	2.8	5.1	6.5	8.8	7.7	6.9	8.2	7.1
Coconino	3.4	1.5	3.4	3.7	5.8	5.8	5.8	6.7	5.1	5.7
Gila	4.8	5.2	3.3	6.0	7.5	9.7	7.0	6.3	5.9	5.8
Graham	4.5	4.0	3.6	5.7	7.9	9.5	6.9	8.7	5.4	6.8
Greenlee	4.2	4.9	2.8	3.7	5.3	7.1	4.6	4.0	2.0	4.0
La Paz	-	-	-	-	-	-	-	5.3	5.2	4.5
Maricopa	7.5	3.3	4.1	6.4	8.3	8.1	7.4	7.0	7.5	7.6
Mohave	5.2	4.0	3.4	5.1	4.9	9.1	8.2	7.8	7.2	6.5
Navajo	2.5	2.0	1.7	4.4	2.9	3.9	3.1	3.6	4.9	3.1
Pima	4.1	4.5	3.7	4.0	7.7	8.6	7.8	6.3	6.2	6.2
Pinal	2.9	2.7	2.3	4.8	6.5	6.1	8.2	6.2	6.2	5.8
Santa Cruz	2.9	1.2	2.0	3.8	3.0	4.2	5.2	3.1	3.3	3.7
Yavapai	4.8	4.3	4.7	5.3	4.8	7.1	8.0	5.9	5.9	6.5
Yuma	4.4	5.7	4.1	5.0	7.8	11.3	9.1	7.3	6.9	6.3

* Per 1,000 estimated midyear population.
** Preliminary

TABLE 10-6

DISSOLUTIONS* OF MARRIAGE BY COUNTY OF OCCURRENCE BY MONTH, ARIZONA, 1987

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Apache	7	4	15	3	3	9	7	8	12	3	12	5	88
Cochise	55	56	62	71	61	82	47	44	55	72	58	50	713
Coconino	55	50	38	71	15	33	63	32	54	34	36	39	520
Gila	19	16	21	12	16	20	29	27	21	13	20	19	233
Graham	8	10	13	16	15	15	20	21	16	8	12	13	167
Greenlee	3	1	4	1	5	4	4	1	4	3	5	4	39
La Paz	6	3	8	7	8	6	3	8	3	5	4	3	64
Maricopa	1,208	1,098	1,631	1,308	1,338	1,416	1,403	1,109	1,206	1,174	1,140	1,154	15,185
Mohave	61	35	39	36	41	26	77	47	53	38	47	19	519
Navajo	10	15	20	14	24	24	20	18	25	30	14	22	236
Pima	331	293	353	319	325	406	360	340	313	368	291	387	4,086
Pinal	57	49	40	35	49	60	61	45	42	65	58	57	618
Santa Cruz	9	13	8	10	12	7	12	6	4	7	7	14	109
Yavapai	73	42	57	55	66	52	50	55	39	37	48	45	619
Yuma	38	48	32	56	44	79	68	29	40	30	81	19	564
MONTHLY TOTAL	1,940	1,733	2,341	2,014	2,022	2,239	2,224	1,790	1,887	1,887	1,833	1,850	23,760

PREGNANCY AND ABORTION STATISTICS

TABLE 11-1

INDUCED ABORTIONS PERFORMED IN ARIZONA BY COUNTY OF RESIDENCE,* ARIZONA RESIDENTS, 1977-87

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
ARIZONA	5,896	6,616	7,620	8,959	10,047	11,965	13,081	13,909	14,537	13,291	15,615
Apache	74	93	94	33	34	39	35	26	45	22	23
Cochise	150	120	94	138	152	220	252	249	279	259	270
Coconino	206	269	279	374	326	389	422	394	313	213	390
Gila	57	51	55	60	79	84	73	62	69	50	49
Graham	18	21	21	37	22	30	31	20	26	20	15
Greenlee	10	13	9	12	8	17	11	15	17	15	30
La Paz	NA	NA	NA	NA	NA	NA	17	14	11	11	9
Maricopa	3,782	4,233	5,645	5,861	6,609	7,989	8,501	9,646	10,035	9,389	12,011
Mohave	25	28	44	44	27	34	21	50	24	36	20
Navajo	59	67	59	72	62	104	100	59	60	40	44
Pima	1,140	1,359	979	1,897	2,316	2,553	3,097	2,876	3,152	2,847	2,282
Pinal	204	152	150	199	166	227	251	164	182	175	187
Santa Cruz	46	40	32	42	43	53	49	57	58	49	53
Yavapai	46	92	100	135	170	186	169	139	141	78	150
Yuma	79	78	59	55	33	40	52	138	125	87	82

* Excludes records with unknown place of residence, and records of out-of-state residents

TABLE 11-2

CHARACTERISTICS OF WOMEN RECEIVING ABORTIONS,
ARIZONA, 1982-1987*

	1982	1983	1984	1985	1986	1987
TOTAL ABORTIONS PERFORMED IN ARIZONA	12,539	13,664	14,874	15,604	14,522	17,138
RESIDENCE						
Resided in state	11,965	13,081	13,909	14,537	13,291	15,615
Resided out-of-state	414	576	362	403	871	1,234
Not stated	160	7	603	664	360	289
AGE						
19 years and under	3,462	3,483	3,422	3,617	2,964	3,504
20-24 years	4,585	5,008	5,637	5,800	4,622	5,393
25 years and over	4,058	4,640	5,340	5,747	5,289	6,364
Not stated	434	533	475	440	416	354
MARITAL STATUS						
Married	2,315	2,526	2,841	2,910	3,144	3,719
Unmarried	9,593	10,603	11,254	11,906	9,427	10,850
Not stated	601	535	779	788	720	1,046
ETHNIC GROUP						
White	10,020	10,854	12,816	13,353	11,442	13,350
Non-white	1,821	2,113	1,329	1,411	1,211	1,326
Not stated	698	697	729	640	638	939
YEARS OF EDUCATION						
8 years or less	347	342	488	550	448	443
9-16 years	10,398	11,736	13,058	13,637	11,561	13,742
17 years or more	354	393	623	665	564	545
Not stated	1,440	1,193	705	752	718	885
PREVIOUS LIVE BIRTHS						
None	7,851	8,150	8,597	8,892	7,204	8,248
1 or more	4,688	5,514	6,277	6,712	6,087	7,367

	1982	1983	1984	1985	1986	1987
FACILITY						
Clinic	8,892	9,009	9,715	9,862	7,164	9,735
Doctor's Office	3,584	4,623	4,111	5,011	5,276	4,831
Hospital	55	27	64	43	40	40
Not stated	3	8	5	984	688	811
TYPE OF PROCEDURE						
Curretage	11,933	13,365	14,669	15,175	12,979	15,306
Intrauterine Instillation	1	-	-	-	1	-
Hysterectomy/Hysterotomy	2	-	1	-	-	-
Not stated	603	299	204	429	311	541
WEEKS OF GESTATION						
12 weeks or under	10,564	11,784	12,937	13,415	11,266	13,689
13 weeks or over	1,659	1,712	1,937	1,952	1,778	1,771
Not stated	316	168	-	237	247	155
PREVIOUS INDUCED ABORTIONS						
None	8,610	9,172	9,798	10,201	8,526	9,856
1	2,897	3,229	3,611	3,747	3,283	4,025
2 or more	1,032	1,263	1,465	1,656	1,492	1,734
COMPLICATIONS						
No	12,531	13,650	14,869	15,595	13,286	15,594
Yes	8	14	5	9	5	21
REASON FOR TERMINATION						
Elective	10,511	13,328	14,611	15,274	13,141	15,228
Medical	15	14	23	16	7	11
Not stated	2,013	322	240	314	143	376

* Since 1986 frequencies are shown for Arizona residents.

TABLE 11-3

BIRTH RATES AND ABORTION RATES BY AGE GROUP,
ARIZONA, 1982-1987*

AGE GROUP		1982	1983	1984	1985	1986	1987
UNDER 15	Birth rate	1.2	1.1	1.0	0.9	1.3	1.2
	Abortion rate	0.9	0.9	0.7	1.0	0.8	0.7
15-19	Birth rate	67.4	65.9	63.6	67.0	66.7	69.1
	Abortion rate	28.3	26.6	28.6	29.6	25.1	27.4
20-24	Birth rate	137.0	132.8	137.4	144.8	142.9	142.5
	Abortion rate	33.7	36.8	41.3	42.6	36.9	39.8
25-29	Birth rate	119.9	117.2	116.7	118.8	117.8	122.6
	Abortion rate	18.8	20.6	22.0	20.6	21.0	22.5
30-34	Birth rate	67.5	67.6	70.1	73.8	74.1	74.7
	Abortion rate	9.3	10.5	11.5	11.5	11.2	12.2
35-39	Birth rate	25.5	25.6	25.6	27.0	23.7	29.3
	Abortion rate	4.5	4.7	5.9	5.6	5.8	5.8
40-44	Birth rate	5.0	5.2	5.0	5.5	5.2	5.2
	Abortion rate	1.6	1.5	1.7	1.7	1.7	1.7
45 and over	Birth rate	0.4	0.3	0.3	0.2	0.2	0.3
	Abortion rate	0.1	0.1	0.2	0.2	0.1	0.1
TOTAL	General fertility rate	78.7	77.1	77.2	79.6	78.2	79.0
	Abortion rate	18.8	19.6	20.9	19.7	17.1	19.5

* The age-specific live birth or abortion rate is the number of live births or abortions per 1,000 females in a specific age group. For females under 15 the calculated rate includes the female population 10-14 years of age. For women over 44 the rate calculated includes the female population 45-49 years of age. The general fertility rate is computed by dividing the total number of live births, regardless of age of mother, by the population of women of childbearing age (15-44 years of age). The total abortion rate is computed by dividing the total number of abortions, regardless of age of mother, by the population of women of childbearing age (15-44 years old).

TABLE 11-4

NUMBER OF WOMEN HAVING ABORTIONS PER 1,000 WOMEN GIVING BIRTH,* ARIZONA, 1982-1987

COUNTY OF RESIDENCE	1982	1983	1984	1985	1986	1987
Apache	21.1	19.6	14.3	24.3	12.5	12.4
Cochise	141.5	161.0	153.9	179.0	169.9	168.1
Coconino	220.0	233.4	217.3	160.8	116.5	194.1
Gila	103.7	106.9	92.3	107.5	80.0	86.1
Graham	64.1	71.3	44.8	64.0	50.6	33.7
Greenlee	66.4	59.5	76.9	105.6	141.5	241.9
La Paz**	NA	NA	71.8	47.0	51.2	45.5
Maricopa	279.3	295.6	314.1	297.1	265.8	328.0
Mohave	38.4	22.7	50.6	24.8	38.8	17.0
Navajo	55.2	52.3	31.6	31.7	21.1	22.2
Pima	278.9	323.1	297.2	306.7	273.1	208.9
Pinal	27.2	134.3	88.7	88.8	85.2	88.0
Santa Cruz	107.9	107.2	111.3	110.9	97.2	96.9
Yavapai	174.3	158.4	139.1	129.6	69.1	128.1
Yuma	21.0	30.9	78.8	63.7	44.2	41.6
ARIZONA, TOTAL:	238.2	258.2	269.9	262.9	218.6	246.6

* Ratios are calculated by relating county-specific number of resident abortions to county-specific number of resident live births in a specified year.

During the period from 1982-1985 all reported abortions, regardless of the place of residence, were used in calculating the overall ratio for Arizona. From 1986-1987 only records specifying Arizona as place of residence were used in calculating the overall ratios for the state.

** Included in Yuma County until January 1, 1983.

TABLE 11-5

ABORTIONS BY AGE AND COUNTY OF RESIDENCE
ARIZONA, 1987

COUNTY	ALL AGES	AGE									
		UNDER 15	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45+	UNKNOWN AGE
ARIZONA	15,615	82	1,174	2,248	5,393	3,611	1,827	744	172	10	354
Apache	23	0	1	3	7	5	3	4	0	0	0
Cochise	270	4	27	47	68	60	29	17	3	0	15
Coconino	390	3	18	64	142	91	51	16	2	0	3
Gila	49	0	12	9	11	5	7	4	0	0	1
Graham	15	0	2	3	5	3	0	2	0	0	0
Greenlee	30	0	1	3	6	10	5	2	0	0	3
La Paz	9	0	1	1	4	3	0	0	0	0	0
Maricopa	12,011	58	865	1,742	4,282	2,817	1,375	563	137	9	161
Mohave	20	0	1	3	9	3	1	1	0	0	0
Navajo	44	1	5	1	13	11	10	1	0	0	2
Pima	2,282	12	195	304	698	506	286	101	26	1	153
Pinal	187	3	18	30	57	37	20	13	0	0	9
Santa Cruz	53	1	1	8	16	10	6	6	1	0	4
Yavapai	150	0	19	16	53	28	22	7	3	0	2
Yuma	82	0	8	14	22	20	12	5	0	0	1

TABLE 11-6

ABORTIONS BY WEEKS OF GESTATION AND AGE,
ARIZONA RESIDENTS, 1987

Weeks of Gestation	Age								
	< 15	15-19	20-24	25-29	30-34	35-39	40+	Unknown	Total
8	14	1,122	2,203	1,645	918	365	86	148	6,501
9	8	531	878	529	293	129	26	63	2,457
10	17	577	884	577	234	91	31	53	2,464
11	10	298	474	282	109	56	12	25	1,266
12	8	266	363	195	101	28	12	28	1,001
13	5	159	145	105	45	13	5	11	488
14	5	136	142	78	30	22	1	6	420
15	3	79	67	47	17	6	1	2	222
16	2	60	47	36	14	10	3	3	175
17	4	42	36	17	10	7	0	2	118
18	0	44	34	12	8	2	1	0	101
19	3	15	17	11	8	1	1	0	56
20	3	49	46	20	11	4	2	6	141
21+	0	19	13	13	3	2	0	0	50
Unknown	0	25	44	44	26	8	1	7	155
Total	82	3,422	5,393	3,611	1,827	744	182	354	15,615

TABLE 11-7

PREGNANCY RATES AND NUMBER OF LIVE BIRTHS, FETAL DEATHS AND ABORTIONS BY AGE GROUP, ARIZONA, 1987

AGE	Estimated Female Population	LIVE BIRTHS	FETAL DEATHS	INDUCED ABORTIONS	PREGNANCIES			
					NUMBER	RATE[1/]	PERCENT ENDING IN ABORTION	ABORTION RATIO[2/]
UNDER 15	119,643	142	4	82	228	1.9	36.0	577.5
15-19	124,921	8,633	59	3,422	12,114	97.0	28.2	396.4
20-24	135,666	19,334	97	5,393	24,824	183.0	21.7	278.9
25-29	160,720	19,712	128	3,611	23,451	145.9	15.4	183.2
30-34	150,004	11,206	83	1,827	13,116	87.4	13.9	163.0
35-39	127,426	3,736	36	744	4,516	35.4	16.5	199.1
40-44	103,036	534	12	173	719	7.0	24.1	324.0
45 AND OVER	83,256	22	2	9	33	0.4	27.3	409.1
Unknown age	-	1	1	354	356	-	-	-
TOTAL	801,729[3/]	63,320	422	15,615	79,357	99.0	19.7	246.6

1/ The age-specific pregnancy rate is the number of pregnancies per 1,000 women specified age group. For females under 15 the calculated rate includes the female population 10-14 years of age. For women over 44 the rate calculated includes the female population 45-49 years of age. The total pregnancy rate is computed by relating the total number of pregnancies, regardless of age of mother, to the population of women of childbearing age (15-44 years of age).

2/ Ratios are calculated by relating age-specific number of resident abortions to the age-specific number of resident live births.

3/ Estimated female population of childbearing age in Arizona in 1987. Population estimates for females under 15 and over 44 are excluded from the total population of women of childbearing age.

TABLE 11-8

PREGNANCY RATES AND NUMBER OF BIRTHS, FETAL DEATHS AND ABORTIONS TO TEENS
BY COUNTY OF RESIDENCE AND AGE GROUP,
ARIZONA, 1987

County of Residence	Under 15				15 - 17				18 - 19				All, 19 or Less Years of Age				
	Live Births	Fetal Deaths	Abortions	Total Pregnancies*	Live Births	Fetal Deaths	Abortions	Total Pregnancies	Live Births	Fetal Deaths	Abortions	Total Pregnancies	Live Births	Fetal Deaths	Abortions	Total Pregnancies Number	Total Pregnancies Rate**
Apache	7	0	0	7	109	0	1	110	163	0	3	166	279	0	4	283	46.3
Cochise	2	0	4	6	79	2	27	108	147	0	47	194	228	2	78	308	39.6
Coconino	3	0	3	6	107	1	18	126	166	1	64	231	276	2	85	363	51.6
Gila	6	0	0	6	29	0	12	41	74	0	9	83	109	0	21	130	40.6
Graham	2	0	0	2	34	0	2	36	47	0	3	50	83	0	5	88	41.0
Greenlee	0	0	0	0	10	0	1	11	18	0	3	21	28	0	4	32	34.0
La Paz	0	0	0	0	20	0	1	21	18	0	1	19	38	0	2	40	39.6
Maricopa	70	3	58	131	1,765	17	865	2,647	3,016	19	1,742	4,777	4,851	39	2,665	7,555	55.8
Mohave	1	0	0	1	56	1	1	58	110	0	3	113	167	1	4	172	34.0
Navajo	12	0	1	13	120	1	5	126	182	0	1	183	314	1	7	322	35.7
Pima	22	1	12	35	472	1	195	668	884	9	304	1,197	1,378	11	511	1,900	44.1
Pinal	10	0	3	13	195	0	18	213	240	1	30	271	445	1	51	497	59.0
Santa Cruz	2	0	1	3	35	0	1	36	44	1	8	53	81	1	10	92	36.8
Yavapai	3	0	0	3	58	0	19	77	107	1	16	124	168	1	35	204	35.2
Yuma	2	0	0	2	111	2	8	121	217	2	14	233	330	4	22	356	51.6
ARIZONA	142	4	82	228	3,200	25	1,174	4,399	5,433	34	2,248	7,715	8,775	63	3,504	12,342	50.5

* Sum of live births, fetal deaths and induced abortions.
** Number of pregnancies per 1,000 females 10-19 years of age.

TABLE 11-9

PREGNANCY RATES[a] AND NUMBER OF LIVE BIRTHS, FETAL DEATHS AND ABORTIONS TO TEENS BY INDIVIDUAL AGE, ARIZONA, 1987

Age	Estimated[b] Population:	Live Births	Stillbirths (Fetal Deaths)	Induced Abortions	TOTAL PREGNANCIES: Number	Rate	Percent Pregnancies Ending in Abortion:
10[c]	24,420	0	0	0	0	-	-
11	23,893	1	0	1	2	0.1	50.0
12	23,880	5	1	3	9	0.4	33.3
13	23,596	18	0	16	34	1.4	47.1
14	23,854	118	3	62	183	7.7	33.9
10-14	119,643	142	4	82	228	1.9	36.0
15	24,451	457	3	201	661	27.0	30.4
16	26,577	1,017	14	438	1,469	55.3	29.8
17	25,940	1,726	8	535	2,269	87.5	23.6
15-17	76,968	3,200	25	1,174	4,399	57.2	26.7
18	24,188	2,387	17	1,147	3,551	146.8	32.3
19	23,742	3,046	17	1,101	4,164	175.4	26.4
18-19	47,953	5,433	34	2,248	7,715	160.9	29.1
TOTAL, 10-19	244,564	8,775	63	3,504	12,342	50.5	28.4

a Rates per 1,000 estimated female population in specific group.

b Based on estimates published by the Arizona Department of Economic Security, Population Statistics Unit, 12/12/86.

c Live births, as well as spontaneous or induced terminations of pregnancy occured in the past to ten year old females. For the purposes of comparability with previously published rates, this subgroup of females - with no pregnancy recorded in 1987 - has been included in this report.

TABLE 11-10

PREGNANCY RATES AND NUMBER OF LIVE BIRTHS, FETAL DEATHS AND ABORTIONS TO TEENS BY ETHNICITY, ARIZONA, 1987

ETHNIC GROUP	Estimated Female Population 10-19 Years of Age:[a]	Live Births	Stillbirths (Fetal Deaths)	Induced Abortions	TOTAL PREGNANCIES: Number	Rate[b]	Percent Pregnancies Ending in Abortion:
White	167,038	4,220	29	2,601	6,850	41.0	38.0
Hispanic[c]	49,402	2,886	21	469	3,376	68.3	13.9
Black	7,826	517	8	186	711	90.9	26.2
Native American	17,853	1,098	5	54	1,157	64.9	4.7
Other Race	2,445	54	0	27	81	33.1	33.3
Unknown	-	-	-	167	167	-	-
All Ethnic Groups:	244,564	8,775	63	3,504	12,342	50.5	28.4

a Based on a "census-share" approach applied by the Arizona Department of Economic Security, Research Administration in generating population projections.

b Number of pregnancies per 1,000 females in specified group.

c Whites are Whites not of Hispanic origin. For the purposes of this classification Hispanics are Whites of Hispanic origin who constitute 97 percent of the Hispanic population in Arizona.

TABLE 11-11

NUMBER OF PREGNANCIES AND PREGNANCY RATES FOR ALL FEMALES AND TEENAGED FEMALES BY COUNTY OF RESIDENCE, ARIZONA, 1987

County	Estimated Female Population of Childbearing Age:[1]	TOTAL PREGNANCIES, ALL AGES		Estimated Female Population 10-19 Years Old	TEEN PREGNANCIES		
		Number	Rate[2]		Number	Rate[3]	Teen Pregnancies as a Percent of All Pregnancies
Apache	13,714	1,890	137.8	6,117	283	46.3	15.0
Cochise	22,702	1,887	83.1	7,774	308	39.6	16.3
Coconino	24,474	2,410	98.5	7,039	363	51.6	15.1
Gila	8,175	620	75.8	3,206	130	40.6	21.0
Graham	5,169	462	89.4	2,147	88	41.0	19.0
Greenlee	2,144	156	72.8	942	32	34.0	20.5
La Paz	2,756	209	75.8	1,012	40	39.6	19.1
Maricopa	462,978	48,877	105.6	135,503	7,555	55.8	15.5
Mohave	16,419	1,207	73.5	5,066	172	34.0	14.3
Navajo	19,968	2,038	102.1	9,020	322	35.7	15.8
Pima	157,555	13,274	84.2	43,049	1,900	44.1	14.3
Pinal	22,380	2,326	103.9	8,427	497	59.0	21.4
Santa Cruz	6,560	604	92.1	2,498	92	36.8	15.2
Yavapai	18,371	1,329	72.3	5,802	204	35.2	15.3
Yuma	18,364	2,068	112.6	6,902	356	51.6	17.2
ARIZONA	801,729	79,357	99.0	244,564[4]	12,342	50.5	15.6

1 Females 15-44 years of age.

2 The total pregnancy rate is computed by relating the total number of pregnancies, regardless of mother's age, to the total population of women of childbearing age (15-44 years old). The total pregnancy rate is presented as the number of pregnancies per 1,000 women 15-44 years of age.

3 Number of pregnancies per 1,000 females 10-19 years old in specified group.

4 The sum of estimates of the female population 10-19 years of age in all counties (244,504) is lower as compared to the total estimate of the female population 10-19 years old in Arizona (244,564). Population estimates used in this report are from Population Statistics Unit in the Arizona Department of Economic Security.

Arizona Department of Health Services
1740 West Adams Street
Phoenix, Arizona 85007

(602) 542-1216